

# California State Journal of Medicine.

Owned and Published Monthly by the  
Medical Society of the State of California

PHILIP MILLS JONES, M. D., Secretary and Editor  
PUBLICATION COMMITTEE.

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Secretary State Society, - - - 2210 Jackson Street,  
State Journal, - - - San Francisco.  
Official Register, - - -  
Telephone, West 5975.

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VOL. V

NOV., 1907.

No. 11

## EDITORIAL NOTES.

In Los Angeles, in San Jose, in Stockton, in Sacramento, as well as in San Francisco, there have been meetings of the local medical societies where the subject of plague was discussed. That is eminently well. There is just one way, and one only, of determining whether or not plague exists in any place; and that is by a careful inspection of all dead persons over a period of months. And this inspection must be made by one who knows. We know that plague, in the early years of an epidemic, is a very insignificant thing, so far as the number of cases is concerned. We also know that it is not difficult to eradicate, in these early years, *if we know that it exists*. How long did it exist in San Francisco before it was recognized? Nobody knows, for its discovery was almost, if not quite, accidental and it was some time before any systematic examination of the dead was enforced. We all know the history of that former epidemic; the shameful history of denial and concealment and the near approach to "shotgun quarantine." This JOURNAL, in its second number, December, 1902, in discussing this matter, said:

"The medical profession regards the subject of such vital importance to the whole country that it should be thoroughly investigated and given all the publicity possible. If there is danger of the plague spreading, it becomes the duty of medical men to warn the public and to do all in their power to stamp out the disease upon its first appearance, and not wait until it obtains a foothold and becomes too strong to cope with."

Because that was printed five years ago makes it no less true to-day. We should know, and know at once, just where the pest infection may have spread during these past years. Recently Oakland has taken up the work of inspection of the dead; and some cases have been found. Alameda and Berkeley will probably do the same thing, when they wake up. We would most respectfully but firmly urge upon Los Angeles, Sacramento, Stockton and other places to begin the same good work. There are other and smaller communities where the work is no less important, and where the expense can not be borne by the local community, it should be the duty of the state to see that the investigation is made and made properly. We can not afford *not to know* whether we are clean or not, and there is but one thing that is absolutely assured—we *do not know* whether we are clean or not. Let us waste no time about finding it out.

Shall we undertake to find out the extent of our infection voluntarily, or shall we wait till we are forced to do it? That is the only matter of choice, for it must be done, sooner or later. A recent news dispatch states that Seattle has turned itself over to the supervision of the Public Health and Marine Hospital Service for the reason that cases of plague had been found in that community. There doubtless have been cases there for some time, but no careful inspection of the dead was enforced and consequently the infection has been only recently discovered. It might have been expected, for any seaport to which comes Oriental shipping—and rats—is at any time liable to infection. The Norway rat is the greatest traveler on the face of the earth; and the Norway rat has been carrying plague from country to country for a good many generations. Lloyd, in his masterly paper published in this JOURNAL, April, May and June, 1904, has given a perfect indictment of the rat; indeed we may, with a certain amount of safety, assume that plague is a disease of rats to which man, and probably some of the domestic animals, are susceptible. For years it exists in an apathetic state. In London, from 1616 to 1625 there were but a few cases annually, but in the last mentioned year the terrible devastation occurred and something like 37,000 deaths were recorded. It was nine years incubating in the city, and then—. Where pest-rats have gone, there they have carried the plague. But where have they gone? Who can say where, in our own State, for instance, they have gone and how far from the port of entry they have migrated, taking with them their mild form of plague infection? No one, for no one knows. And there is the one place where lies danger; *what we do not know*. Let us, by all means, waste no valuable time in finding out just how far this insidious infection has gone, and then let us get rid of it—as we very well can do. Two things alone are certain; where there are plague-infected rats or squirrels, there will occur occasional cases of plague in man; and where there are cases originat-

ing of plague in man, there we will find plague infected rats—or squirrels. A careful inspection of all dead, for a period of about six months, will pretty conclusively demonstrate the presence or absence of plague in any locality, and it should be done immediately in many sections of our state. The only question is whether we shall do it now, of our own volition, or wait till we are forced to do it by means that will be very unpleasant, to say the least.

Once again the JOURNAL feels called upon to emphasize the fact that all laws regulating the

#### ENFORCE THE LAW.

practice of medicine are police measures intended for the protection of the public against predatory greed and ignorance. Neither legislatures, courts nor judges are at all interested in the various schools of the art of treating the sick or injured; they can not, constitutionally, legislate in favor of any class, and medical laws are not in any particular intended to favor or protect any class or school of physicians. If they do in any way protect physicians as well as other members of the body politic, it is incidentally and not essential to their operation. That the public needs all the protection that any legislature can be induced to give, is axiomatic, with us, for we know the gullability of the average sick layman. How can he be expected to know the incurability of *tuberculosis*? And the blind credulity of one in the last stages of *tuberculosis* is not alone a matter of general knowledge, but is so well understood that it has made hundreds, if not thousands, of conscienceless sharks rich. Just as it is well to keep poisoned gumdrops from a child, so is it well to keep the foolish and credulous layman from the greedy clutches of the quack; *we* know it, but neither the child nor the layman can understand these things. All this is apropos of some very good resolutions recently passed by the Los Angeles County Medical Association, and published elsewhere in this number of the JOURNAL. They sound an unmistakable note of endorsement of the present law and of the work the board is attempting in the matter of the suppression of quacks and pretenders, and it would be an excellent thing for every county organization in the state to endorse these resolutions and thus record itself. And not alone must our support be moral; we must aid in beginning the work with our financial support. As already pointed out, in a previous number of the JOURNAL, the board is without funds to undertake these prosecutions, and until a sufficient number of fines have been paid, it will be without resources.

Why should we put our hands in our pockets to aid in this work? Because, incidentally, our profession benefits in reputation by the

#### WHY SHOULD WE HELP?

extinction of the quack. The general public's ignorance, which is appalling, does not permit it to discriminate between the competent physician and the soft-spoken, well appearing, suave and greedy quack. Any one calling himself "Doctor" will be

accepted as such by the public, and the quack passing himself off as a "Doctor"—Quaker, Indian or otherwise—brings discredit upon our whole profession by his very existence and his ignorant acceptance by the public. Of course, there will always be those who are pining for the worship of strange gods. So long as material things wear out, so long as human credulity lasts, so long as many diseases and complications remain incurable, so long as the primal instinct of superstition remains in the human mind, so long will there be those who will not believe in the verdict of the physician, but will abide in a magnificent faith that somewhere, somehow, something, will cure them. We imagine that about as long as there is any human race, there will be eddyism, or some other fool thing to take its place when eddyism shall be forgotten, and there will be venders of "patent medicines" which will appeal to a certain element as the thing desirable above medical advice. That is all right; it is human nature and in no way affects the proposition that we should do our own duty, as we see it, and help to protect the public ignorance, as far as we can, from the consequences of its abiding faith and superstition. It is right, and our duty, to do everything in our power to see that the medical law is supported and lived up to and enforced; and, incidentally, it will enhance the respect paid to our profession when the quack and the pretender shall have been driven out. It has been said that there never was a law that did not do injustice to somebody, and that is eminently true of medical laws in general. But while the occasional case of hardship should excite our compassion, it should not divert our attention from the greater good which is given to the enormously larger number of people. Our law is by no means a perfect instrument; but it is a good, safe one and should be rigidly lived up to. It is the best law we have yet had to protect the public from their folly, and it is the duty of every one of us to make it his personal business to see that the law is enforced, or know the reason why.

There was recently held, in the City of New York, the annual meeting of the American Pharmaceutical Association. It was not-

#### SIGNS OF THE TIMES.

able for the reason that at least two distinguished delegates from the American Medical Association were in attendance, and that their addresses provoked very general and very interesting discussion of the question of the relation of the pharmacist to the physician. It may be said, in passing, that the A. Ph. A. represents, more especially, the scientific side of pharmacy, whereas the National Association of Retail Druggists devotes the major portion of its energies to the "patent medicine" business, urges druggists to "boost" almost any old thing that can be sold at a profit—even "peruna"—and mixes, or did mix, unpleasantly in state politics with the purpose of annoying physicians. This last allegation was made by Dr. J. N. McCormack, in his address, and was hotly denied by several of those who subsequently discussed his remarks. It is to be re-

gretted that Dr. McCormack did not have at hand the data to confound these gentlemen and support his statement, which, as the JOURNAL has more than once proved, was absolutely correct. It is unfortunate that we have not the space to publish Dr. McCormack's paper in full, as well as that of Dr. Solomon Solis-Cohen, as they both ring true. That there have been mistakes made on both sides, and that all the right is with neither the physician nor the pharmacist, this JOURNAL has repeatedly pointed out. Indeed, memory fails to recall any publication in this country, medical or pharmaceutical, that has more energetically pointed out the ways in which physicians have been led into doing injury to the pharmacist, than has your own STATE JOURNAL. It is a lot better to work together in peace and harmony than to be eternally at loggerheads, and as we have all made mistakes, let us not waste time in abusing each other—the task of the pot calling the kettle black is neither entertaining nor cleanly—but let us try and “get together” and do away with the objectionable things in both camps. Let the physician enlighten himself on the subject of materia medica and cease from being led into ordering every new and foolish thing that comes along, thus burdening the pharmacist unnecessarily; let him use intelligence in prescribing and thus encourage the pharmacist in compounding and permitting him a decent profit on his prescriptions. The Council on Pharmacy and Chemistry is printing very edifying reports that should be carefully studied by us all to the end that we learn how useless are many of the “ready made” medicines we have been coaxed into using—to the detriment, professional and financial, of the pharmacist. And let the pharmacist cease from counter prescribing and holding himself out as a genito-urinary specialist; let him quit the highly undignified course endorsed by the N. A. R. D. of “pushing” any old “patent medicine” that he can buy for \$8.00 a dozen and sell for \$1.00 a package. Let us each try to clean up our own premises and thus make good use of the energy we would otherwise employ hammering the other.

Elsewhere we publish some remarks from Mr. Alpers, of New York. Hr. Alpers thinks he has been sadly injured by this JOURNAL and we feel somewhat sorry for Mr. Alpers, who for some years has been one of the leading pharmacists of New York City, and a very distinguished member of the American Pharmaceutical Association. He was interested in the chemistry of guaiacol derivatives and a few years ago developed one which he called “triacol” (Alpers). This was exploited to the medical profession by a company formed, presumably, for that purpose, and was found to have some merit, we believe. In the JOURNAL for September, 1906, we called attention to an advertisement of “triacol (Alpers)” that appeared in the current number of *Ainslee's* magazine and which was pretty rank; an out and out “patent medicine” advertisement. Our article was reprinted by the *Journal A. M. A.* and subsequently included in the

booklet gotten out by the Association. Mr. Alpers says he has been injured financially as a consequence, for many of the leading physicians of New York withdrew their patronage from his store. As a further injurious result of our article, he stated that objection had been raised to his holding the office of president of the New York Branch of the American Pharmaceutical Association. He says that he has no control of the Alpers Chemical Company, which promotes “triacol (Alpers),” yet he is a stockholder and a director in it. He presumably permits his name to be used in the title of the company and in connection with the remedy, yet did not know, according to his statement, that the name and the remedy had been exploited exactly as any other “patent medicine,” as witness the following quotations from the *Ainslee* ad: “*Interesting booklet sent on request, telling what triacol (Alpers) has done and is doing in the cure of coughs, bronchitis, etc.*” \* \* \* *At all department stores and druggists. Price \$1.00, express prepaid.*” The JOURNAL feels sorry for the fact that Mr. Alpers has been injured in his good name and in his purse, but it fails to see how he can blame anyone but himself, or his business associates whose commercial activity permitted the use of a name which had, for so many years, been highly honored in the councils of the American Pharmaceutical Association and amongst pharmacists generally. It is unfortunate that such things should occur; very unfortunate both for medicine and for pharmacy. But if they were ignored, how much greater would be the misfortune, for how many more such instances would we see?

What shall we do—what can we do—if we see our community threatened by some epidemic and the threat made more portentous by the wilful blindness, or worse, the would-be political jugglery of those who have been elected to govern it, our supervisors, councilmen, etc? Well, there are several things we can do. We may sit complacently and smile the inward smile of conscious virtue and wisdom and let things take their course, afterward getting the inane “I told you so” out of the system. Or we may slumber peacefully, in the slumber that is so near to death that we won't know when we really are dead, and mutter in our sleep that “politics is dirty” and that we shall have none of it; it is not ours to govern the community. Or we can do something a little more intelligent and manly; we can demand—not ask—that rectitude and common sense rather than trickery and peanut-politics guide our governors in safeguarding the public. We have had two excellent examples of this latter spirit in this state very recently. A good live committee of the San Francisco County Medical Society was, let us say to a small extent, instrumental in securing the retirement of the old and inefficient Board of Health and the appointment of a reliable board. Still more recently, the JOURNAL is advised, it came to the attention of the local County Medical Association, that some of the health inspectors of Los Angeles were to be removed—pos-

# ANOTHER APOLOGY.

## SLUMBER OR WORK?



sibly for some occult political deal. The County Association thereupon put itself on record most emphatically (see report of their last meeting), and appointed a committee to wait upon the council and tell the distinguished councillors what the medical profession thought of the matter. As a result, not only were the removals *not* made, but an extra appropriation of some \$20,000 was made for emergency work, cleaning up, rat killing, etc. Which strikes you as the better course: to slumber along and allow the community to suffer as a result of petty greed for political influence or dirty dollars, or to take an active and intelligent interest in "the science or art of government" and see that those who guide the community in which you live shall properly *guard* it as well?

### PLAGUE IN SAN FRANCISCO.

As previously noted in these columns, bubonic plague has existed in San Francisco since May 27, 1907. Up to October 29, 1907, the report is as follows: Total cases verified to date, 78; deaths, 50; discharged as cured, 19; remaining, 9.

The work of plague eradication is being actively carried on by Passed Assistant Surgeon Rupert Blue, U. S. P. H. & M. H. S., assisted by Passed Assistant Surgeon W. C. Rucker, Executive Officer; H. A. Stansfield, bacteriologist, and Passed Assistant Surgeons Carroll Fox, C. W. Vogel, R. H. Creel, Assistant Surgeon J. R. Hurley, Acting Assistant Surgeons Bruce Ffoulkes, J. L. Howard, L. S. Schmitt, P. M. Thomas, G. A. Weyer, C. H. Woolsey, G. M. Converse, and Doctors H. H. Hopkins and A. D. Prentice as district commanders.

Already the anti-pest measures seem to be bearing fruit, as the number of cases is gradually diminishing and the disease is not so scattering as formerly. The recent cases have come from the refugee camp near Lobos Square.

Dr. Blue is carrying on a splendid campaign. A sanitary survey is being made of the entire city, rat poisons are being freely distributed and about 1,000 rats a day are being trapped.

Passed Assistant Surgeon J. D. Long has been assigned charge of the Oakland work under Doctor Blue. Four positive and five suspicious cases have occurred there. Dr. Blue has instituted the same measures in Oakland as in San Francisco, with good results.

### PLAGUE.\*

By WM. SIMPSON, M. D., San Jose.

In all epidemics it has been found that even skilled physicians fail to recognize the disease, mistaking it for common carbuncle, infection of the lymph glands, typhus, intermittent fever, or anthrax. The disease attacks persons of all ages and social conditions and both sexes.

The ordinary clinical and pathological features of the disease are now well known; it constitutes a symptom-codex, notably in the bubonic form, that affords little difficulty of diagnosis. The appearance of fever, associated with painful glandular enlargements in the groin, axilla, neck or region of the epitrochlear gland, after a period of incubation lasting variously from three to nine days, with

severe headache, nausea and vomiting at the outset, roughly indicates the cardinal symptoms of typical bubonic plague. The fever varies between 103° and 105° F., but often rises as high as 108° F. During convalescence the fever falls by lysis usually, by crisis rarely.

The condition of declared illness is preceded by warning symptoms, sometimes of an hour's and sometimes of a day's duration. These are pallor, depression, pains, headache, thirst, loss of appetite. The onset of the disease is frequently sudden, with sharp, burning, or dull pains on the spot on which later the glandular inflammation, or carbuncle, or the pneumonic manifestation appears. This is followed by a sensation of cold, culminating in a severe, shaking chill, succeeded by fever. The fever may last an hour or a day before the local symptoms appear.

The onset of the disease is almost invariably accompanied by a feeling of dizziness in the head. This may increase to a painful roaring accompanied by indications of great weakness and failing power to control the limbs. Nausea and vomiting frequently accompany this condition, and not infrequently weakness of heart to the point of collapse.

When the patient comes into the physician's hands, the disease is usually well developed. The staring gaze, the bloated, languid, and expressionless face, the injected cornea, the thick, stammering speech, the uncertain gait, give the patient the aspect of a drunken man. This appearance is heightened by the outbreak of bloody boils. The tongue is red and lumpy or else coated with white. The skin is generally hot and burning, especially about the face and trunk, while the pulseless limbs are cold and covered with a slimy sweat.

The breathing is painful and labored, the heart action weak, the arteries are relaxed, the pulse of the radials is dicrotic and approaches extinction, while the heart action is still good.

After taking to his bed the patient lies in a condition of great weakness and tendency to sleep, murmuring softly and disconnectedly, or throws himself about restlessly, talking deliriously, imagining that he must return to his home or his business, or quench his thirst, and he will try to escape if his attendants do not hold him down in bed.

In glandular or bubonic plague the most frequent form of the disease is characterized by the appearance of a bubo, which, sooner or later and to a greater or less degree, develops into an inflamed swelling and affects the surrounding tissues. Any external lymph gland may be the first seat of the disease. In most cases the bubo appears in the region of the thigh or groin, frequently under the arm, or, especially in children, on the neck. In isolated cases the buboes appear on the back of the head, at the elbow joint, the knee caps, the outer or inner ear glands, the hyoid bone, etc.

Pneumonic plague, which is the prevailing form in some plague epidemics, generally follows the course of an ordinary violent catarrhal or croupous pneumonia. When the general symptoms are very severe there may be difficulty in differentiating it

\*Read before the Santa Clara County Medical Society, October 16, 1907.



from other inflammations of the lungs without bacteriological examination.

Bubo, plague-pustule, or inflammation of lungs appears at the beginning of the disease, sometimes even before the fever, or develops clearly a few hours or days after. Their appearance is seldom deferred till the third day.

In all forms of plague the early appearance of heart weakness is noted, together with irritation of stomach and abdomen, extreme sensitiveness to pressure in the region of the epigastrium and the cæcum, violent nausea, later, also the expulsion of black fecal matter.

The course of the disease varies, many a case of skin and gland plague proving to be fairly mild and benignant, while pneumonic plague may terminate rapidly in death. In the bubonic form the neck buboes appear to be a condition of the gravest cases, frequently causing death by suffocation. There are also cases in which death occurs before any appearance whatever of localization, before the patient is even made aware, by pain, of his condition. The third, or at most the fourth day, brings a reduction of the fever and very frequently death. If the patient passes the third or fourth day he may remain free from fever and in the end recover, or the fever may come on again and again run its course. On the sixth or ninth day a marked lowering of the temperature and pulse curve almost invariably occurs, so that a prolongation of the disease, even into the second week, may occur, apparently as the result of supplemental infection due to the formation of secondary buboes. Before death the fall in the temperature of the body corresponds with the decline in strength, or it may fall suddenly. It may also rise and even in the dead body be 42° C., and more.

The progress of the disease as here traced may be diverted by other infections. More frequently the accompanying infections are due to streptococci, staphylococci, pneumococci, or the bacilli of influenza. Death may occur at any point of the disease. In cases in which recovery occurs the decline of all the symptoms may take place suddenly or by degrees. When not due to suffocation, caused by neck buboes or pneumonia, death is usually caused by a general failure of the circulation.

Prognosis of the disease is difficult. Recovery occurs in 10 and often in 40 per cent of cases. It may be stated that when the patient is free from fever on the third or sixth day he will probably recover should no complication occur. Mortality is extraordinarily great among the consumptive, the syphilitic, and infants. A second attack of plague is rare. The second attack is generally fatal.

**Bacteriology of Plague.**—The evidence of the specific organism is especially important in preventing wrong diagnosis. The best protection for physicians and attendants is absolute cleanliness. The great dangers of infection through the sputum of living plague patients and the œdematous exudation from the lungs of the dying are to be especially guarded against. Disinfection must be applied to all excreta of the patient and to all articles that

come in contact with him. For chemical disinfection, solutions of sublimate (1-1000), carbolic solution (3 per cent) cresol soap and chloride of lime solutions are especially to be recommended.

**Epidemiology.**—It has been demonstrated that plague spreads slowly after its introduction. In many instances it has been found to be confined to the family in which the first case occurred and to persons who have come in contact with the plague patient. It will then make its appearance in neighboring houses or in a distant quarter to which it has been conveyed by persons who have been in contact with the plague patient. In this manner the disease fixes itself when it has found a favorable soil and remains unnoticed during weeks and months, when it often develops quite rapidly and reaches its maximum at first by quick and then by slow degrees. Its extinction is often only apparent. After a period of suspension lasting weeks or months a fresh epidemic not infrequently begins and this may also have still further developments.

An important feature in the conditions affecting plague is the disposition of the disease to confine itself to separate dwellings and to discriminate among the persons resident there. When the persons affected are removed from the house further infection may by care be prevented.

The plague germ is received into the lymphatic system of a healthy organism by small unobserved injuries to the epidermis, slight scratches, flea-bites, and the like. In other cases it may be taken in by way of the mucus of the mouth or throat, the conjunctival sack, or the nostrils, or may be taken into the bronchial tubes by way of the respiratory passages.

That these various means of infection from man to man constitute an open door for transmission when an unclean people live in close, dark, and crowded houses is apparent.\*\* Where light and air are freely admitted and cleanliness prevails plague finds no soil for an epidemic spread.

**Prevention of Spread.**—Plague is a disease which not only affects rats but is spread by them. Accordingly measures should be taken to quarantine them or to encompass their death speedily.

Cases should be removed to hospitals ventilated and lighted to the maximum as the absolute essentials, whatever other conveniences they may have, for the experience of the East yields this conclusion: The organism does not seem to be able to develop virulently where there are free currents of air, and hence it passes by and little affects well ventilated buildings.

All those who have been exposed to infection or have been in contact with cases are known as "contacts," and should be kept for a certain period in segregation camps where daily inspections can be held until the period of incubation is over. All infected dwellings should be disinfected and lime-washed.

\*\*While contact infection probably occurs in a few cases, it constitutes only a very small percentage of infections. The principal disseminator of plague is the rat, and the ordinary infecting agent seems to be the flea. Ed.

The proper disposal of the dead and the disinfection of effects are, of course, to be looked out for as in an epidemic of any infectious disease. A house-to-house inspection for new cases in places where there are none reported is wise if it is tolerated, but in the Orient this has been one of the most fertile means of causing the concealment of cases, and concealment is regarded as probably the most effective means of spreading the disease.

*The Haffkine Prophylactic.*—As a preventive measure against plague, Haffkine, an investigator formerly of the Pasteur Institute, has, as is well known, prepared a prophylactic consisting of dead cultures of the bacillus pestis, injections of which are said to confer a considerable degree of immunity against the disease. Haffkine's experiments indicate that the precipitate of dead bacteria without the clear fluid injected into animals excites a marked local reaction with only slight constitutional phenomena, while injection of the clear fluid without the dead bacilli causes marked general phenomena, with slight local reaction. The whole sterilized culture is used as the vaccine against the plague.

*Serum Treatment.*—Another form of treatment used in Bombay hospitals is the "Heilserum," also prepared under the patronage of the Government at the Parel Government House, by the assistants of Professor Lustig, whose name it bears. The serum has not been extensively employed in India because of its scarcity, and also on account of the prejudices of the natives. It had, however, been used in some 500 cases, with 60 per cent recoveries and 40 per cent mortality, while the death rate in untreated natives may run as high as 80 per cent. Those who are engaged in taking the serum maintain that much better results than those indicated in the above percentage can be obtained by increasing the number of healing units in the serum. In one of his articles Lustig states that he succeeded in curing completely 26 out of 30 cases of plague with his serum.

The serum of Yersin, somewhat similar to that of Lustig, has been used in India, but the results obtained by its use were not satisfactory, although it must be acknowledged that the number of cases upon which it was judged was ridiculously small. It may be worthy of note that Yersin's serum possesses agglutination power toward virulent cultures of the plague bacillus.

*Quarantine Regulation for the Prevention of the Introduction of Plague into the United States and Its Dependencies.*—Passengers should not be vaccinated at nor en route from ports or places infected with plague. Such vaccination increases the liability to plague infection, and, by inducing fever and swollen glands, tends to confuse diagnosis at the port of arrival. This operation must be performed at the port of arrival, and just prior to release from quarantine.

In a port where plague prevails, the vessel should not tie up to the dock. No lines should be passed to the shore that might permit rats on board. Passengers and cargo should be lightered; the crew

not be allowed ashore, and personal communication from shore to vessel shall be under medical supervision. A statement to this effect from a medical officer of the Marine Hospital Service will have weight with the quarantine officer at the port of arrival in determining the questions of disinfection and time of detention.

Mammalian animals, such as dogs, cats, monkeys, mice, etc., which not infrequently accompany passengers as pets, should not be shipped from a plague-infected or suspected port or place.

*Inspection of Plague.*—In the case of vessels infected or suspected of being infected with plague, place vessel in quarantine in anchorage sufficiently remote from the nearest land or other vessel to prevent the escape of rats by swimming.

Pilots, customs officials, agents of vessels, or others who go aboard vessel may be deemed and be treated as a part of the personnel of the vessel. Such persons shall be detained in quarantine a sufficient time to cover the period of incubation of the disease, if in the opinion of the quarantine officer said persons have been exposed to infection; and their dunnage, if any, shall be disinfected.

In inspecting infected or suspected vessels, the personnel of the vessel shall be inspected after the removal of all clothing which will interfere with a thorough examination of all glandular regions including axillary, inguinal, and cervical.

Female inspectors should be provided for inspection of female personnel. They shall be instructed by the quarantine officer in the general symptomatology and recognition of the disease, but final decision is to be made by the quarantine officer.

Special attention shall be given to the detection of ambulant, or walking, cases, which are a source of great danger and apt to be overlooked, because they present few objective signs to attract attention.

Special attention should be directed to the pneumonic type of the disease. Any person presenting pulmonic symptoms of rapid course, with or without glandular enlargement, should be the subject of special inquiry, and if possible, of bacteriological examination.

In suspected cases, specimens of pus, sputum, or the contents of lymphatic glands may be sent to the hygienic laboratory of the Marine Hospital Service at Washington, for examination.

A vessel from a plague-infected or suspected port, carrying passengers but no ship's surgeon, may, in the discretion of the quarantine officer, be quarantined with all on board, for the full fifteen days from the completion of disinfection.

*Treatment of Plague-Infected Vessels.*—Persons with abrasions or open sores should have them protected with proper dressings before being permitted to handle persons or articles believed to be infected with plague.

*Preliminary Disinfection.*—After removal of the personnel a preliminary disinfection of all accessible parts of the vessel must be performed with sulphur dioxide. This preliminary disinfection should be started in the morning in order that guards may be

placed on deck and in small boats around the vessel to detect and destroy any escaping rats.

The water supply must be changed without delay, the casks or tanks disinfected by steam or 10 per cent solution of potassium permanganate, and, after thorough rinsing, refilled from a source of undoubted purity, or the water supply must have been recently boiled. Some water tanks are not readily inspected and cleansed on account of their inaccessibility; these may be rendered safe by leading a steam pipe into them and boiling the water in situ.

Nothing shall be thrown overboard from the vessel, not even deck sweepings. Such material shall be burned in the furnace or in a place specially designated, but not in the galley.

The body of no person dead of plague shall be allowed to pass through quarantine. The body should be cremated, if practicable. If not, it should be wrapped, without preliminary washing, in a sheet saturated with a solution of bichloride of mercury, 1 to 500, surrounded in the coffin by twice the body weight of caustic lime and buried.

*Disinfection of Holds of Vessels.*—By twenty-four hours' exposure to sulphur dioxide, 10 per cent per volume strength, generated by an approved furnace, or forty-eight hours' exposure to 5 per cent per volume strength, generated by pots.

No person should be allowed on the vessel or around the cargo with bare feet, and the use of proper caution in handling dead vermin is advised.

*Living Compartments of all Classes of Vessels.*—The preliminary disinfection shall be done with sulphur dioxide and not with formaldehyde on account of the greater potency of the former against animal life.

*Note.*—Navigation Laws of the United States, section 5, act August 2, 1883:

"Every steamship or other vessel carrying or bringing emigrant passengers, or passengers other than cabin passengers, exceeding fifty in number, shall carry a duly qualified and competent surgeon or medical practitioner, who shall be rated as such in the ship's articles, and who shall be provided with surgical instruments, medical comforts and medicines proper and necessary for diseases and accidents incident to sea voyages, and for the proper medical treatment of such passengers during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeon or medical practitioner shall be promptly given, in any case of sickness or disease, to any of the passengers, or to any infant or young child of any such passengers who may need his services. For a violation of either of the provisions of this section the master of the vessel shall be liable to a penalty not exceeding \$250."

There is a strong probability that the rat was responsible for the introduction of the plague into Oporto; there is little doubt that it was introduced into Santos through the same medium; private advices from Honolulu indicate that it was not there

introduced through food stuffs or merchandise, but that again the rat was the responsible agent.

Rats migrate from ship to ship along docks and quays in search of food, and ships loaded with rice and other food stuffs should therefore be particularly looked after. They should be subjected to fumigation prior to taking on cargo, and subsequently guarded to prevent as far as possible the invasion by rats.

That in the fleas of rats and mice we may find the bacillus of plague, was announced in 1897, giving plague to mice by inoculating them with infected fleas. That this bacillus may be inoculated into rats and mice by the bites of fleas is very possible, and it is proved that the fleas of rats and mice transmit the disease to man.

### EFFECTS OF BATHS ON BLOOD PRESSURE.\*

By PHILIP KING BROWN, M. D., San Francisco.

Experiments to determine the effects on blood pressure of irritating ingredients added to baths of various temperatures and a comparison of these results with those obtained from a study of the separate effects of the various components of Nauheim baths, have given me definite results. The object of these experiments has been to simplify, if possible, the Nauheim bath or to find a substitute for it, and to ascertain what dangers there may be in using Nauheim baths in cases of high blood pressure from circulatory conditions.

All cardiac therapy, in acute and chronic disease, needs to be based upon a more rational physical basis, and drug therapy in particular is often disappointing to us because of the difficulty of measuring the working capacity of the heart and of influencing evenly and continuously the conditions under which it works. Cabot's experiments on the influence of drugs on blood pressure, during fever, showed plainly under what mistaken ideas we have carried on a good deal of our therapy in cases of severe heart tax.

For two years I have been working along the line of influencing the heart by lessening its work, and recording the clinical manifestations of improved heart action under these conditions. These manifestations are change in blood pressure, rate and evenness of pulse, amount of urine eliminated, and comparative comfort of the patient, especially where nervousness and insomnia are marked. It is, of course, difficult to judge all these conditions fairly, and the experimenter is often blind from over-enthusiasm. The observations, however, were many times made by nurses and the specially-trained attendants who have given baths for me, and the results are so uniform that it seems fair to state them as facts. I shall limit myself, in this paper, to the effects of baths on blood pressure.

The observations were in each case made by two

\* Read at the meeting of the Ass'n of American Physicians, Washington, D. C., May 5-7, 1907.



persons. The machine used was a Stanton with wide cuff which was kept on during the baths. One person kept track of the patient's pulse while another made the readings on the mercury column. This was done to minimize the chance of error due to the natural desire to make the readings uniform. In all cases the readings were made three times and an average taken. The position of the mercury at the time of the reappearance of the pulse was taken as a measure of systolic pressure. The average morning pressure taken at 7 a. m. was determined to be about 15 mm. lower than the mean for the day. This pressure is raised promptly 15 to 20 mm. by the first meal and does not fall again until the usual drop in the late hours of night. The meals following the breakfast do not materially influence the pressure in patients who have had a hearty breakfast, but may raise it 10 to 15 mm. for a few hours in some patients.

The first case, exemplifying the above conditions, was a healthy male, aged thirty-seven years, with a slightly rapid heart, but no organic lesion. The following is the mean of the observations made at various times during two years: A fifteen-minute warm bath, 94° to 98° lowered the pressure on an average of 15 mm.; pulse rate varies little or nothing.

A fifteen-minute strong NaCl bath, seven pounds to forty gallons, 94° to 98°, lowered the pressure 10 to 15 mm.; the pulse may be slightly slowed.

A fifteen-minute calcium-chloride bath, one and one-half pounds to forty gallons, 94° temperature, raised the pressure 15 mm. This is true even if the pressure has been raised already by food taken a short interval before.

A fifteen-minute mustard bath, one and one-half pounds to forty gallons, 94°, had the same effect as a warm bath, lowering the pressure 15 mm., without altering the pulse. The skin was scarcely reddened.

Three pounds of mustard in a bath of 94° temperature, given for ten minutes, or the weaker mustard bath, with vigorous friction applied to the skin, has the effect of raising the pressure, and reddening the skin markedly for an hour or more. A fifteen-minute full strength, alkaline effervescent Nauheim bath, at 86° to 94°, raised the pressure rapidly during the first half of the bath, and more slowly during the last half, making it altogether about 20 mm. *This effect lasts during the daytime about four hours.* When the bath is taken at night, 11 p. m., the pressure on the following morning at 7 a. m. is not as low as normal by 5 to 10 mm., showing that the usual drop through the sleeping hours is not as marked as is normal.

In fevers, pneumonia, typhoid, septicemia, and abscess of lung after pneumonia, the blood pressure is always raised by the full strength Nauheim bath. This statement is based on more than 500 observations made in young and old, and includes cases complicated by the common forms of muscular and valve-heart lesions, and arterial changes. In no case was there a record of the pressure before the

acute illness, and during the illness there was no case whose pressure was above 160 mm. at any time. In pericardial effusion, paroxysmal tachycardia, and exophthalmic goitre, no improvement in pressure or pulse was observed.

The duration of the increased pressure in the calcium-chloride bath has not been studied.

When there is no increased pressure following a Nauheim bath, properly given, the muscular tone of the heart is dangerously weak, except in cases with very high pressure. In most cases where the pressure is not raised, the patient has been overtaxed physically in the effort of taking the bath, or the bath has not been strong enough or has been too warm.

In patients with high pressure from arteriosclerosis without kidney lesions, the results are very variable. As a rule the pressure changes but little from any kind of a bath. It is not uniformly raised by calcium chloride or the full strength Nauheim bath and may fall slightly for one-half to two hours after a bath. At the same time the pulse is slower, so that it would seem that the work of the heart had been much lessened for a time.

As blood pressure is dependent on the volume of blood in circulation, the peripheral resistance and the energy of the heart, it seems fair to look for improvement in circulation from anything that lessens the resistance or increases the heart energy. While regularity, slowing and fulness of the pulse follow the bath, there is no evidence that they result directly from the effects of the bath upon the heart in increasing its energy; they are dependent rather upon the lessening of the heart's work by lessening of resistance to be overcome. The lessened resistance alone, without a change in the heart's energy, would lower the pressure, so that the fact of a constant increase in pressure from Nauheim and calcium chloride baths is evidence of an increase in the heart's energy sufficient, not only to overcome the lowering caused by the peripheral dilation, but also to raise the pressure in the dilated peripheral vessels beyond what it was before. This is better understood when we realize that 299 parts of the heart's energy is expended normally in overcoming resistance, for every part expended in maintaining velocity. It is conceivable that the effects of lessened peripheral resistance is to conserve the heart's energy, thus giving more opportunity for maintaining velocity, and keeping up the pressure in the arteries.

**CONCLUSIONS.** Peripheral dilation from carbonated and calcium chloride baths show, by ordinary tests, that the heart's work is more effective.

In fevers the blood pressure is raised, which is not the case with ordinary heart stimulants (Cabot).

It seems likely that the calcium chloride bath is quite as effective as the carbonated bath.

## INSECTS AND INFECTION.\*

By WILLIAM B. WHERRY, M. D.

(Frank B. Yoakum Laboratory of the Oakland College of Medicine.)

You will pardon me if I explain that the title of this long paper was chosen for the sake of brevity. I shall speak not only of the role of the *Insecta* in the transmission of infectious agents but also of other *Arthropoda* such as some of the *Arachnoidea*, e. g., the ticks.

Our ideas concerning the hygiene of infectious processes occurring in man and other animals have undergone gradual change. One might consume several hours in simply reading off the names of those who have contributed to this change. While much of the advance made in recent years is to be credited to the medical profession, they in turn were often greatly influenced by those working along strictly biological lines. This is especially true of the development of our knowledge concerning the life history of animal parasites in general. As I shall hope to show, human medicine always must be grateful to workers in general biology and comparative pathology for many fundamental conceptions.

The idea that insects might transmit infectious diseases from one animal to another, dates back many years, and many observers had speculated upon its possibility. But it was one of our own countrymen who first demonstrated to the world the actual role played by a haemophagous parasite in the transmission of a disease. I refer to the remarkable work of Dr. Theobald Smith on Texas fever in cattle.

This noted comparative pathologist worked for three years on the transmission of this disease before publishing his observations. He was so fearful lest his experiments, which had led him to a hitherto unheard of conclusion, might be faulty, that he repeated them over and over and only when repeated confirmatory results were obtained did he give them publicity. The elucidation of the mode of transmission in Texas fever is all the more remarkable when one reflects that the disease is not transmitted by the tick which sucks up infected blood but by her progeny; for having sucked blood, the tick drops off her host, lays her eggs, and dies.

Since Pasteur in 1870 demonstrated the "pebrine bodies" in the silk worm disease of France, it has been known that an insect may lay infected eggs and so hand down a disease to its offspring.<sup>(1)</sup> In this instance Pasteur was dealing with a disease among insects transmissible through ingesta, traumatic injuries inflicted upon one another and by heredity. Infected eggs could be recognized under the microscope and Pasteur showed that the little caterpillars emerging from the infected eggs must be destroyed in order to prevent their infecting healthy larvae. This discovery was fundamental; and while it meant millions of francs to the people of France, it meant more to the

world—for it was a truly dramatic demonstration of the value of a hygiene based on facts obtained through patient research.

The work of Dr. Theobald Smith was equally fundamental in character in that it presented to the scientific world the first definitely proven instance of the transmission of a parasite from one mammal to another by one of the arthropoda. The parasite producing Texas fever is so small and its wanderings through its definitive host so complicated that until perhaps recently, the stages of its extra-corporeal existence remained unknown.<sup>(2)</sup>

Some work done not long ago by Dr. Fritz Schaudinn might instance a series of metamorphoses which probably rival those of the piroplasma in their complexity. Celli and Sanfelice (1891) had described the crescentic forms of a parasite occurring in the blood of a little owl (*Athenae noctuae*) under the name of *Haemoproteus noctuae* (=Haeteridium). Schaudinn thought he had demonstrated that this parasite was in reality a trypanosome which maintained its existence by an alternation of generative processes and a change of hosts.<sup>(2)</sup>

He not only followed the asexual life history of the "*Trypanosoma noctuae*" within the blood of the owl which acts as one of its intermediate hosts, but step by step, as he thought, cleared up the complicated nature of its extra-corporeal existence within the stomach and tissues of a mosquito (*Culex pipiens*) which acts as its definitive host.

To me, the most interesting discovery made by him does not concern the details of the metamorphosis of the parasite within the insect or the fact that after feeding on infected blood it can reinoculate the disease. Analogous instances had been furnished long before (1898) by Ross in the case of Proteosoma infection of birds; and by Manson and his son, in the case of human malaria.

The most interesting part of Schaudinn's work lies in the fact that certain phases of this trypanosome may also pass through the eggs and larvae into the next generation of perfect mosquitoes. And further, that the insect which has just emerged from its pupa can not transmit the disease at once, but can at the time of its third feeding! However, it might be well to state here that the recent work by Novy and his associates on the natural occurrence of trypanosomes in birds and mosquitoes has thrown doubt on the validity of Schaudinn's observations.

It is practically impossible to trace the origin of conceptions which have led to fruitful results in science but it seems quite possible that that patient missionary physician, David Livingstone, may have influenced some of the early workers by his reports (1857) of the existence of a fatal epidemic disease among animals in the wilds of Africa. This disease was popularly believed by the negroes to be transmitted by biting flies and was known as "Tsetze-fly Disease."

And again, a missionary physician in China, Dr. Manson, between 1879 and 1883, observed that the embryos of *Filaria bancrofti* were taken up by a cer-

\*Read at the Thirty-seventh annual meeting of the State Society at Del Monte, April, 1907.

tain species of mosquito and underwent a further development in its body. At this time he believed that the developed embryo might gain access to water and through this medium return again to a human host. Then came the brilliant inductions of Dr. Manson (1896) concerning the life history of the malarial parasite. He was, no doubt, influenced in his reasoning by his previous work on the development of *Filaria nocturna* in mosquitoes, and, probably too, by the work of Dr. Theobald Smith on Texas fever. He reasoned *a priori*:

(1) Since the parasite is encased in the blood cells and can not escape from one host to another by its own efforts, it must be removed by some blood-sucking animal—probably a suctorial insect; an insect common in swampy places where malaria is common—hence probably a mosquito.

(2) That the flagellated forms developing in malarial blood exposed to the air for a few minutes were not degenerated forms but represented the extra-corporeal homologue of the intra-corporeal spore.<sup>(3)</sup>

It is interesting to note here that for a long time previous to this the inhabitants of the malarial districts of Italy had believed that the mosquito played some role in the transmission of the disease, and according to Koch, this same belief was shared by the natives of Africa.

Manson's first hypothesis was confirmed by Ross in 1897, when he described the growth of pigmented parasites in the body of an *Anopheles* fed on aestivo-autumnal blood. His subsequent observations on the metamorphosis of the *Proteosoma* of birds and the subsequent researches of Grassi and many other investigators have amply confirmed this hypothesis.

The second hypothesis, in regard to the flagellated forms, received its first support from this country. The flagellated form was considered by Danilewsky to be an independent parasite and he named it *Polymitus*. While Manson, Laveran and Metchnikoff believed it was connected with the further development of the parasites of malaria, Grassi, Celli, Felletti, Sanfelice and others believed that they were degenerated forms of the parasites produced by exposure to a lower temperature than normal. In 1897, Opie noted that there were two kinds of spheres in the malaria of birds—coarsely granular and hyaline forms, only the latter of which developed polymitus forms. At the same time MacCallum made the important discovery, while studying the halteridium of crows, that these flagellated forms were actually *sexual forms*.

Since then our knowledge of the role of insects in the transmission of infectious diseases has taken rapid strides and physicians today must have at least a literary knowledge of the subject if they pretend to qualify in the Science of Hygiene.

We can logically divide the subject matter into three parts:

(1) Insecta, which act as intermediate hosts for parasites.

(2) Insecta and Arachnoidea which act as definitive hosts for parasites.

(3) Insecta and Arachnoidea by which parasites are transplanted mechanically.

I. *Insecta which acts as intermediate hosts for parasites*—The early observations of Manson on the metamorphosis of *Filaria nocturna* in the bodies of certain mosquitoes (*Culex fatigans*) were confirmed and extended by the work of Low in 1900. His discovery of the developed embryos in the mouth-parts of this insect led to the generally accepted theory that the parasites are reinoculated into their definitive host by the bite of certain mosquitoes. This opinion received strong support from the work of Grassi and Noe on the *Filaria immitis* of dogs. These workers were able to transmit the parasites to healthy dogs through the bite of infected mosquitoes (*Culex pipiens*). James showed that in India, both *Anopheles* and *Culex* may act as intermediate hosts for *Filaria nocturna* and the work of Grassi and Noe proves the same lack of specific selectivity in the case of *Filaria immitis*.

However, the work of Dr. Low seems to indicate that the *Filaria perstans* is more particular in its choice of an intermediate host, for out of a large number of careful experiments with many different species and genera of mosquitoes, only one *Taeniorhynchus fuscopennatus* was found suitable for its metamorphosis.

If we consider, for a moment, another form of infection in dogs, due to the *Filaria recondita*, we find that Grassi found its intermediate host to be the dog flea.

In the case of the Guinea of Medina worm, it is altogether probable from the work of Fedschenko in Turkestan—since confirmed by Manson and Blanchard—that some crustacean, like the fresh water cyclops, acts as intermediate host.

II. *Insecta and Arachnoidea which act as definitive hosts for parasites*—I have spoken of the transmission of Texas fever by the *Rhipicephalus annulatus*. In Africa this form of piroplasmosis, known as Rhodesian or Red Water fever, is transmitted by the *Rhipicephalus appendiculatus*. In Germany it is transmitted by the *Ixodes ricinus*. I will merely mention the piroplasmosis of sheep and dogs transmitted by the ticks *Amblyomma hebraeum* and *Haemaphysalis Leachi* respectively.

Then I would recall the recent work of Dr. H. T. Ricketts who has shown that the spotted fever of Montana, and neighboring states, may be transmitted from one experimental animal to another by a tick (*Dermacentor occidentalis*). The seasonal occurrence of this disease would seem to indicate that its virus finds a definitive host in the tick or in some mammal other than man.

I might mention here the role of *Culex pipiens* acting as a definitive host for the *Trypanosoma noctuae* as described by Schudinn, but would remind you of the doubt thrown upon his observations by the work of Novy and his associates.

Under this heading we may also include the *Anophelenae* and the *Stegomyia Calopus* which, as



you all well know, act as the definitive hosts for the parasites of malaria and yellow fever. There is no evidence that malaria may be transmitted by heredity through the Anopheles. So far as I know there is only one such instance on record in the case of yellow fever. This is reported by Marchoux and Simon<sup>(4)</sup> from Brazil and must be open to question since other investigators have been unable to confirm it.

III. *Insecta and Arachnoidea by which parasites are transplanted mechanically*—Ever since the early experimental work of Simond Hankin and Nuttall, many attempts have been made to prove or disprove the role of the flea in the transmission of Bubonic plague. The frequent association between epidemic plague in rats and in man naturally suggested the possible existence of an insect intermediary. This association seems to have existed even in the earliest historical times. The Biblical account of an epidemic<sup>(5)</sup> would seem to show that the relation between mice and rats and epidemic buboes was recognized as early as 1141 B. C.

In the summer of 1905 I had the pleasure of visiting the plague research laboratories in Bombay. Plague was at its height that summer, reaching a mortality of 60,000 per week. The English Plague Commission, headed by Dr. Martin of the Lister Institute of Preventive Medicine, was then actively investigating the role played by the flea in the transmission of plague. I wish I could give you a picture of the enthusiasm with which these young and old men engaged upon their research, in the face of that awful melting heat. Reports of their extensive experiments furnish overwhelming proof that the flea is an important transmitting agent.

I would next speak of a group of diseases in which it is impossible to say at present whether the Arachnoidea concerned in their transmission act mechanically or as intermediate or definitive hosts—though it is probable that their action is mechanical: The recent studies of Novy and Knapp<sup>(6)</sup> and others on relapsing fever have thrown much doubt on the protozoan nature of many of the spiral organisms which Schaudinn classed as *spirochetes* and have proven, almost conclusively, that the *Spirillum Obermeieri* is to be classed with the bacteria. A number of these spirillar diseases in animals and man are transmitted by blood-sucking parasites. The spirillosis of fowls by the *Argas miniatus* (Marchoux and Salimbeni; Borrel and Marchoux); the cause of bovine spirillosis (*Spirillum Theileri*) by the *Rhipicephalus decoloratus*.

Sixteen years ago Pasternazki found the *Spirillum Obermeieri* viable after some time in the body of the leech. In 1902, Karlinski reported them viable in bedbugs thirty days after feeding on infected blood. From 1904 up to the present, through the work of Ross, Milne, Dutton, Todd, Koch, Novy, Knapp and others, the African "Tick Fever" has been proven to be a spirillosis showing slight variations from that discovered by Obermeier. It is transmitted by the bite of a tick (*Ornithodoros Savignii moubata*), and may be transmitted through

the female and her eggs to her young. Neither Eorrel, Marchoux, Dutton, Todd nor Koch have noted any developmental stages inside of these ticks and the work of Novy and Knapp seems to furnish justification for the belief that in these diseases we have bacteria which may be transmitted by heredity to the young of infected ticks.

We will now consider the mechanical action of various biting flies and fleas in the transplantation of parasites. The discovery of trypanosomes in the blood of rats was made by Lewis in 1879. In India, this was followed by their detection in the blood of horses suffering from "surra," by Evans, in 1880. Then came the discovery by Bruce (1894) that the dreaded Tsetze-fly disease of nagana of Africa was caused by a trypanosome. In 1898, Nepveu, in Algiers, described trypanosomes found in eight human beings, but his discovery was overlooked until Ford and Dutton, in 1901, discovered them in the blood of a patient in the River Gambia Colony in West Africa.

The popular conception that nagana was spread through the agency of Tsetze-flies was confirmed by the experimental work of Bruce, who showed that the *Glossina morsitans* was capable of inoculating the parasites immediately and up to within forty-eight hours after feeding on the blood of an infected animal. Since then the experimental work of Rodgers and Schilling in India; Voges in South America; Dutton, Brumpt and Koch in Africa; Curry, Musgrave and Clegg in the Philippines, and many others, have proven conclusively that various Tsetze-flies (*Glossina*), Gad flies (*Tabanidæ*) and stinging flies (*Stomoxys*) act as the chief transmitters of mammalian trypanosomiasis. Musgrave and Clegg also furnished experimental proof that the flea may transmit surra from dog to dog, rat to rat, and rat to dog. The flea had already been condemned as the transmitting agent in rat trypanosomiasis by the work of Plimmer, Bradford, Rabinowitch and Kempner. It is generally believed that the trypanosomes are carried in the simplest mechanical way by these insects. Koch, working in German East Africa, thought he could trace developmental forms in three species of *Glossina* (*morsitans*, *pallidipes*, *fusca*). However, the recent work of Novy in Michigan has upset and thrown much doubt upon the validity of Koch's observations by pointing out the necessity of distinguishing between *pathogenic* forms which may be taken up by flies and mosquitoes and those *non-pathogenic* forms which probably normally occur in many of these insects.

Leaving out of consideration the occasional wholesale dissemination of typhoid bacilli by a contaminated water or milk supply, their transference by contact and the measures to be taken in destroying these parasites as they leave an infected host during the disease and after convalescence, I wish to direct your attention to their mechanical transplantation by the various species of house flies (*Musca domestica*, *Anthomyia canicularis*, *Lucilia Caesar*.)

The important part played by these insects in the

dissemination of typhoid bacilli was shown by Majors Reed, Vaughan and Shakespeare in their report on the "Origin and Spread of Typhoid Fever in the United States Military Camps During the Spanish-American War in 1898." They note that "flies alternately visited and fed on the infected fecal matter and the food in the mess tents. More than once it happened when lime had been scattered over the fecal matter in the pits, flies with their feet covered with lime were seen walking over the food. Typhoid fever was much less frequent among members of messes who had their mess tents screened than among those who took no such precaution."

This report received valuable experimental support from the work of Dr. Alice Hamilton, carried on during the typhoid epidemic of Chicago in July, August and September of 1902. A number of workers had shown that flies walking over typhoid cultures picked up the germs and transplanted them shortly afterwards. But it remained for Dr. Hamilton to demonstrate<sup>(7)</sup> that flies caught in undrained privies, on the fences of yards, on the walls of houses, and in the room of a typhoid patient *actually carried* typhoid bacilli. Flies caught in such localities were used to inoculate 18 culture tubes and from 5 of these the typhoid bacillus was isolated.

No doubt the so-called "summer diarrhœa" of children, institutional and acute epidemic dysentery, with which the *bacillus dysenteriae* of Shiga, and related types of bacilli are associated, may be transferred in the same way.

There have been more than two millions of victims to cholera in the past six years. In this disease as in typhoid, man acts as chief carrier. Comparatively recent research has shown that apparently *healthy* individuals may act as carriers for these micro-organisms. The Germans style such individuals *Bacillen-traeger*. It is a well-known fact that patients recovering from typhoid often harbor and excrete typhoid bacilli in their urine for weeks; and the classical case of the bakeress of Strassburg, reported by Kayser, would seem to show that certain individuals may harbor these parasites in their gall bladder and excrete them in their feces for years.

In 1905, Gotschich found typical cholera spirilla in the intestines of pilgrims returned to Tor from Mecca. Cholera had failed to appear in Mecca that year and yet these perfectly healthy individuals had picked up and carried the germs for a period of more than five months. The specific identity of the germs isolated can hardly be questioned since they were also studied by Gaffky, Kohler, Kolle and Meinicke. The propagation of cholera from town to town and from one country to another is, no doubt, through human agency, but in its transfer from individual to individual, flies play an important role. In a disease like Asiatic cholera, where, in the acute stages, every drop of the intestinal evacuations contains literally thousands of spirilla, the chances of their successful transfer by flies can hardly be questioned. This belief is strongly supported by the classic experiments of Hankin in India, who found

cholera spirilla in sterilized milk exposed to flies in an endemic focus.

Then, I have no doubt that flies play an important part in the spread of certain forms of ophthalmia, especially of Egyptian ophthalmia, or what is vulgarly known as "pink eye" in this country. In India I have seen dozens of flies crawling over the purulent ocular secretions of a child afflicted with this disease, and when brushed off, to fly away and alight on the dirty faces and eyes of neighboring children.

Those of us who know enough protect our children from the milk of tuberculous cattle. How well, let me ask you, do we protect their food stuffs against the fly? I would remind you of the interesting observations of Lord<sup>(8)</sup> who found that tubercle bacilli, taken up from sputum, undergo a marked proliferation in the intestinal tract of the common house fly and are discharged with its feces. The "specks" of such infested flies contained as many as 5000 bacilli; and according to Lord, thirty infested flies may deposit from 6 to 10 million tubercle bacilli in three days! Please compare these with the comparatively few bacilli to be found in milk of tuberculous origin.

According to L. O. Howard, extended observations have shown that over 99 per cent of the flies found in kitchens and dining-rooms and attracted to food supplies are house flies (*M. domestica*). Then, there are little fruit flies of the genus *Drosophila*, which you have all seen. Their life cycle is no doubt often represented by the vicious circle—eggs laid on over ripe fruit on a dining-room table, taken into the human alimentary tract, passed out with the feces, from which the insects hatch and fly to fruit on some one else's dining-room table. I was accustomed, during my youth in India, to see our food stuffs on and off the table protected by wire screens. It seems that local boards of health could do much to educate the ignorant of the necessity of protecting such food stuffs as milk, butter, bread, cold meats, fruit, etc., from flies.

Chantelesse quotes from an American writer: "It should be more of a disgrace for a house-keeper to have flies in her house than bed bugs in her beds;" but if you will reflect for a moment, many a poor house-keeper is not so culpable as many a board of health, which, year after year, allows piles of horse manure to lie unscreened and so donates to the public an annual visit from one of the plagues of Egypt.

It seems to me that in such a State as California—where such a great variation in topographical and climatic conditions obtain—many problems, connected with the transmission of infectious diseases by hæmophagous parasites, are open to study. We have had plague here; malaria and filariasis have been imported, and may be endemic in some sections.

Certainly there are sections in which diseases, if imported from tropical zones, could flourish.

May I ask what has been done to determine the

*presence, bionomics and distribution of such insects as might play a role in their transmission?*

(1) In 1884 Balbiani classified these "pebrine bodies" as microsporidia and now the parasite is known as *Nosema Bombycis*.

(2) R. Koch is said to have pictured his observations on its development in three varieties of ticks in East Africa (1905).

(2) By an alternation of generative processes is meant the alternation of a sexual with an asexual method of reproduction. This method of reproduction was first noted by Steensrup in 1842, but probably the first biologist to properly interpret the significance of conjugation among the protozoa was Balbiani who in 1876 observed that a continual asexual division of certain forms resulted in decreased size and a general "lowering of the life energy." He rightly concluded that the purpose of conjugation was to rejuvenate the species. (Calkins.)

(3) Along with the publication of Manson's inductions came the exactly opposite opinions of Bignami who believed that the mosquitoes derived their infection from some as yet unknown stage of the malarial parasite occurring out in nature and subsequently inoculated man with their bite. He believed this opinion was supported in part by the role played by ticks in the transmission of Texas fever and also by one blood inoculation experiments of Gerhardt. But experiments conducted by Bignami and Dionisi failed to substantiate their views. Koch believed that there was truth in both views and further cited the analogy in the transmission of the Tsetse-fly disease—already established by the experimental work of Bruce.

(4) Ann. l'Inst. Past. 1906, xx, no. 1.

(5) 1st Sam., v. and vi.

(6) J. of Inf. Dis. 1906, 3, 291.

(7) Jour. A. M. A., 1903, Feb. 28th.

(8) Pub. of the Mass. Gen. Hosp., 1906, 1, 118.

## BRAIN SYMPTOMS OF TYPHOID FEVER SIMULATING THOSE OF MAS- TOIDITIS.\*

By KASPAR FISCHER, M. D., San Francisco.

Dr. E. W. Day and Chevalier Jackson in a very thorough paper (Laryngoscope, 1904, Vol. XIV), drew our attention to the fact that ear affections are much more frequent in typhoid fever than are usually supposed. This can easily be explained by the fact that a routine examination of the ears of typhoid patients is made in very few hospitals and hardly ever in private practice. In over 800 cases of typhoid fever they found 88 (11.3%) cases of purulent otitis media and 26 cases of suppurative mastoid involvement (29%) of the cases of purulent otitis media. This is a very high percentage considering the fact that those cases had been observed from the very start and treated according to the best principles. How much oftener these complications must occur when the ears are not examined at all!

I would like to report a case of the opposite type that is one in which the mastoid symptoms were so pronounced that typhoid fever was not diagnosed until very late:

On October 31, 1903, Miss M. G. L., 18 years old, was sent to me from Palo Alto by Dr. Clelia D. Mosher. The patient had had measles as a baby and could never hear well with the right ear. This had been discharging for the last five months. The right drum showed a large perforation in the posterior lower segment filled out by a polypus. After this was removed a quantity of membranous detritus was taken out with a probe and tincture of iodine introduced on a cotton carrier. After a few treatments the ear became dry.

Toward the end of November the patient had afternoon temperatures—a rise of from  $\frac{1}{2}$  to 1 degree. On December 9 she complained about dizziness. The right mastoid process was sensitive to pressure. Dr. Mosher, after a careful examination, could only find the symptoms of a slight upsetting of the digestive apparatus (coated tongue, yellow skin, headaches) attributed to an error in diet. There was no enlargement of the spleen. On December 10 the temperature was 99, pulse 84; the blood count showed 6000 leucocytes; the urine was normal. That day, during my absence, because of the sensitiveness of the mastoid and the dizziness, a colleague opened the mastoid. The mastoid cells were filled with a yellow watery fluid; swabs remained sterile. On my return December 17, the patient was again put under my care. She was feeling well, only complaining of weakness. The evening temperature was 99.7. On December 19 the temperature rose to 101, going higher, the next few days, to 102.9 on December 21. The patient complained about aching of the eyes and was sensitive to the shaking of the bed. The fundus of the eyes was normal. As the symptoms pointed to meningeal irritation the cerebellar fossa was opened on December 21. Fluid blood was found in the sinus. Aching of eyes and sensitiveness to shaking disappeared. On December 24 the temperature rose to 103.6. I opened the middle fossa, but found no pus. The temperature dropped again to 101.2, rising but slightly the next two days. From December 27 to January 3 the temperature rose to 104.4, pulse 116. On January 3 the sinus was opened and fluid blood found.

During the whole illness the bowels were kept open. The patient was very sensitive to calomel, which caused considerable griping pains. The urine remained normal, repeated blood counts showed from 6000 to 7000 leucocytes, swabs from the wound were either sterile or showed staphylococcus growth. As the condition of the wound did not explain the high temperature nor the pulse indicate any meningeal irritation, I suspected some complication and called in consultation Dr. Herbert C. Moffitt, who found enlargement of the liver and spleen, and ordered the widal test, which was positive. Therefore typhoid fever was diagnosed.

Under Dr. Moffitt's care the patient recovered without any further complication.

The mastoid wound was healed with the exception of a small necrotic spot, which required another operation July 7, 1904, leading to an entire cure by August 6, 1904.

Conclusions: The patient probably had typhoid fever before the mastoid operation. When and where the patient contracted the disease could not be ascertained. The sensitiveness of the mastoid might be explained by its being a locus minoris resistentiae where the toxins created an irritation. I did not see the patient until a week after the mastoid operation. The sterility of the swabs speak against any infection having been present. My second and third operation and the opening of the sinus were certainly unnecessary and useless. Happily, thanks to the aseptic methods, no permanent harm was done. The fact is of some interest that the symptoms of meningeal irritation disappeared after my first operation, and that the temperature dropped considerably after each operation.

This case teaches us the valuable lesson that in a doubtful case of mastoiditis we should make a thorough physical examination, not only of the ear, but of the whole body.

\*Read at the Thirty-seventh Annual Meeting of the California State Medical Society, Del Monte, April, 1907.



## FUNCTIONAL KIDNEY DIAGNOSIS.\*

By W. P. WILLARD, M. D., San Francisco, Cal.

The determination of the functional capacity of kidneys is a subject that has interested the urologist for several years and has become a method of value to the surgeon. The exposing of one kidney with some assurance that the other one is able to perform the required amount of work gives the operator a feeling of safety. Even after exposing both kidneys, as suggested by Edebohls, we are not in any better position to judge of their functional capacity unless gross lesions are present.

The plan followed after obtaining the urine from either kidney by ureteral catheterization was to find the amount of urea per cubic centimeter, the amount of sugar, the freezing point and the microscopical picture of the separate specimens. These three methods have proved of little value from a medical standpoint and have gradually fallen into disuse. In nephritis the kidney condition is only a part of a general one and the toxins are as yet unknown, so it does not seem reasonable to expect to learn much as to the condition of the kidneys by determining their response to such drugs as sodium chlorid, phloridzin, salicylic acid, etc. Neither can anything of value be expected from cryoscopy, where the intake and output cannot be accurately determined. Even if something could be learned in medical cases by determining the functional capacity of the kidneys by subjecting the mixed urine to those tests, they would have to be performed so skillfully that the clinician would be unable to make them.

As the methods have been gradually abandoned by the medical men so they have gradually grown into greater favor with the surgeon. In surgical lesions we are not determining the functional capacity of both kidneys together, but are comparing the work done by one kidney with that of the other one. In doing this we should use at least three tests to avoid error in any one and to draw conclusions get striking differences in the results of the two sides. In quite a few cases of unilateral lesions I have found the figures on one side three or four times those of the other. These tests must be such that they can be made without taking too much time and the technique must be simple so that grave errors are not easily made.

In cryoscopy with ordinary care results can be obtained that are not more than two-tenths of a degree at fault, and for comparison this need not be considered. It requires about twenty minutes to freeze a specimen, and the first part of the time can be devoted to one of the other examinations. After the mercury has dropped two or three degrees below zero it must be carefully watched to see that the rise of the column, due to the release of the latent heat of crystallization, is rapid and to determine at what point it remains stationary, a few seconds, as

later there will be a slight fall below the true freezing point.

The freezing point of a fluid is proportional to its concentration, and for this reason we obtain an idea of the ability of either kidney to excrete solids. Although urine is a complex mixture, we are here obtaining the two specimens to be compared from the same individual.

The following points should be observed and the time of freezing will be shortened and the results will be more accurate. Use a cryoscope that has the stirrer moved by machinery so that its motion may be perfectly rhythmical; have at least two-thirds of the bulb of the thermometer immersed in the urine without allowing it to touch the bottom of the glass; have a thermometer marked in freezing points only; keep the tubes clean, and do not allow too much water to accumulate in the freezing mixture. Make the two tests as nearly alike as possible in regard to the freezing mixture, the amount of urine used and the rate of stirring.

The phloridzin test is one showing the activity of the secretory cells of the tubules. In a functionally impaired kidney the amount of sugar excreted is diminished and the time of its appearance is delayed.

Twenty minims of a half per cent solution of phloridzin is injected hyperdermically and the urine collected from both catheters as soon as sugar is present. This can be determined by examining from time to time with Fehling's solution. The sugar usually appears about a half hour after injection and the specimens of each urine should be collected simultaneously. It is better to make a fresh solution each time, as very often a solution a few days old is inactive, and warm it sufficiently to dissolve all the crystals. For the quantitative examination I have used the Lowenstein's fermentation saccharometer, with which results are accurately and easily obtained. I have in normal cases many times obtained results showing no greater difference than one or two hundredths per cent, although you must wait 24 hours for fermentation, the small quantity of urine necessary makes the test better for our use than the polaroscope. By using three instruments, one for either specimen, and a control of distilled water the results are obtained under the same conditions.

With the Hufner apparatus the quantity of urea can easily be obtained, and although the method is open to criticism I found after comparing the results obtained from the urines of a number of normal cases very little difference in the amount of urea from the two sides. This urine also must be collected from the two sides simultaneously and the amounts of urea per cubic centimeter compared.

The methylene blue test is supposed to test the epithelial filtration. I have not used it, but advocates now admit that, to be of value, a quantitative estimation of the dye is necessary. This is difficult and not reliable. The dilution test has been used by some observers, but it is necessary to leave the catheters in the ureters for three or four hours. The

\*Read before the Western Branch of the American Urological Society.

patient is given one or two quarts of water and the freezing points of the urines are obtained from time to time, and also the quantity excreted is measured. The salicylic acid test and the quantitative examination of chlorides might be used, but they are more difficult than the tests described. My experience with blood cyroscopy in conjunction with these tests, although limited, has not been satisfactory. If it is of value the technique must be such that the ordinary worker would find it very difficult.

The microscopical examination is, of course, of great value for diagnosis, but it does not show the functional capacity of the kidney. The urine from a functionally disabled kidney might show very little microscopically, and again a kidney whose function is fairly good may present so many elements that one would be inclined to think the organs very much diseased. Blood cells can often be found in catheterized urine, due to the movement of the catheter in the ureter, and the contractions of the ureter on the catheter, especially if the catheter is left in any length of time.

Many have not tried these tests, thinking that a great amount of time is necessary both in collecting the urine and in making the tests. In ordinary cases enough urine can be collected for cryoscopy in a half hour. This same urine after freezing can be melted and used for the urea test and for microscopical examination. The phloridzin is injected after the ureters have been catheterized, and as soon as sugar appears enough urine can be collected for quantitative examination (about 1 cc.) in a few minutes. The time of collecting the urine samples should not exceed thirty-five or forty minutes, and the examination of the specimens can be performed in about the same length of time.

I think the chief value of these tests is for comparison and not so much in the actual points found. The so-called normal points are subject to so many influences that I do not think we should place any reliance upon them. In a case seen the urine from the right kidney gave a freezing point of  $-0.4$ , while that from the left gave  $-1.2$ ; the sugar on the right side 1.28 per cent, on the left 0.25 per cent. The freezing point on the healthy side was three times that of the other, and five times as much sugar was excreted by the healthy kidney. Where we have such differences I think that we are able to draw some conclusions. In this particular case, a Grawitz of the right kidney, numerous blood and epithelial cells were seen in the specimens from both sides. In a long-standing case of nephrolithiasis of both kidneys, with the urines of both loaded with pus, the question of which side to operate first was decided by finding which gave the lowest points. This one was operated first, and had it not I am sure the patient would not have survived, as the kidney was badly diseased.

In conclusion I will say that in order to appreciate the value of these methods you must become familiar with them.

### UTERUS FORCEPS.\*

By GEORGE B. SOMERS, M. D., San Francisco.

In operating on the female pelvic organs through an abdominal incision, it is often necessary to grasp the uterus for the purpose of fixing, holding or ele-

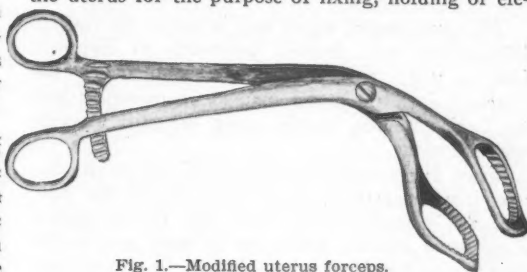


Fig. 1.—Modified uterus forceps.



Fig. 2.—Uterus forceps applied.

vating it. The instruments commonly used are vulsella, which often lacerate the fundus so severely as to produce troublesome hemorrhage and cause a waste of time in repairing the injuries.

The only instrument that I know of devised to hold the fundus without injuring it is one described several years ago by Cullen of Baltimore. I found his instrument inadequate, as it does not grasp firmly enough and allows the uterus to slip. To hold the fundus firmly and with the least possible injury I designed the instrument whose appearance and use are sufficiently shown by the accompany cuts.

It is needless to say that its chief use is in conservative work. Where a hysterectomy is to be performed, the injuries produced by vulsella may be disregarded.

(The original drawings were made by Dr. A. A. Atkinson.)

\*Reprinted from article in The Journal of the American Medical Association. They kindly loaned cuts.

## THE EVOLUTION OF THE DISEASE-ENTITY CALLED MANIO-DEPRESSIVE INSANITY, AND ITS MAIN FEATURES.\*

By A. W. HOISHOLT, M. D., Stockton.

The term mania, which was in use at the time of Hippocrates, was derived, according to Esquirol, from a word signifying moon, from which the Greeks coined the word maniac, moon-struck and the Latins lunatic, words which are still in common use today.

When Hippocrates wrote his book on sacred diseases it was currently taught and believed that nervous and mental diseases were due to the agency of spirits or demons, which the ancients used in the sense of a guardian spirit—hence the expression, sacred diseases. Although his knowledge of the anatomy and physiology of the circulatory and nervous systems was so crude, Hippocrates was not only ahead of his time, but ahead of men that followed him for over two thousand years, in recognizing that insanity was a disease of the brain—a disease of the body, like other diseases.

In his book, *De Morbo Sacro*, Hippocrates says: (1) "The so-called sacred disease does not seem to me to be any more godly or sacred than other diseases; on the contrary, it seems to me to have natural causes, which bring it about." "I do not believe that the human body can be made unclean by the deity, the impure by the pure." "Were these diseases (insanity in general and epilepsy in particular) more godly than any of the other diseases, then they would develop equally among all human beings and would show no difference between the bilious and mucous constitutions, but the internal occasional cause of the illness lies as in some other important diseases in the brain. Mankind must know that pleasant sensations such as joy, laughter, humor, originate from no other organ than that of the brain; so also sorrow, pain, despondency, and loud weeping. Through this organ we especially perceive, think, see and hear, differentiate between the morally beautiful and hideous, the evil and the good, furthermore the agreeable and the disagreeable, differentiating in part according to laws derived from customs, in part perceiving the use itself. Through this organ we recognize according to circumstances agreeable and disagreeable sensations, through this part (of the body) we do not at all times find pleasure in one and the same object. Through the same organ, however, we fall into frenzy, incoherent talk, and find ourselves surrounded by day as well as by night, by terrible phantoms and objects inducing fear; dreams are started, inopportune errors (illusions), unnecessary sorrows, incognizance of existing circumstances, unwontedness and inexperience: All this emanates from the brain. When the brain has become more moist than it is naturally, it is set into motion; if, however, the diseased part is stirred up, then neither can the sense of vision nor that of hearing

rest, but must soon see this or hear that and the tongue must likewise pronounce that which at every moment is alleged to be seen or heard. So long as the brain remains at rest, so long is the human being in possession of full consciousness. The brain is the messenger of the power of thought." These wonderfully correct ideas as to the functions of the brain and nature of insanity did not, however, prevail long. Insanity came to be looked upon more and more as a demoniacal state, and with the advent of Christianity and the growth of the church-power, the persons so afflicted were believed to be individuals who on account of their sinfulness were possessed of evil spirits and were cared for accordingly. Maltreated by priests and tortured by reason of their supposed witchcraft, the poor wretches who happened to suffer from this disease received no sympathy and no care, which state of things has lasted until comparatively recent times. Even during the last century has progress been slow in lifting the veil of religious superstition and soul-philosophy from the true nature of the insane state.

In his second book of diseases (*De Morbo Liber Secundus*), Hippocrates speaks of melancholy as a disease in which the bile has become depraved, black, and rushing to the brain obscures the animal spirits and produces delirium. He says: (2) "The patient has a sensation as if he were pricked with thorns, becomes afflicted with anxiety, dreads the light and people, loves darkness and becomes tormented with fear. He takes fright easily, sees in dreams frightening images and phantoms of terror, even at times deceased persons. If one does not treat the patient with the greatest care, the disease will follow him until he dies."

Religious melancholy was at that time regarded as dependent upon the course of the stars, its periodicity strengthening this belief. However, not only did the ideas of the ancients on the subject of being possessed by spirits, and as to the influence of the moon and the stars upon the insane, prevail through the middle ages to comparatively recent times, but the doctrine expressed by Hippocrates that bile played an important role in insanity was likewise suppressed with difficulty. Even Esquirol in his publication of 1845 says in one place: (3) "It is certain that the word melancholy often presents to the mind a false idea, for melancholy does not always depend upon the bile." To the manifestations of melancholy enumerated by Hippocrates, Aretaeus and Galen added fury. When this was present in mania they also made use of the term melancholy. From the time of the last mentioned writer (131-200 A. D.) to the middle of the 19th century great fluctuations and uncertainties of opinion were expressed with regard to what constituted the condition known as mania and melancholia. About the time of Pinel less importance was placed upon the state of the affects in the application of melancholia to mental conditions, and more upon the delusions or fixed ideas present, for which reason Chiarugi advised to name the condition at that time known as

\*Read at the thirty-seventh annual meeting of the California State Medical Society, Del Monte, April, 1907.



melancholia, insanity of fixed ideas, afterwards called monomania by Esquirol. Rusk, in his publication of 1812, divided melancholy into two forms; the one characterized by sadness he called tristimania; the other, in which the opposite emotion predominated, he called amenomania. Esquirol, in his "treatise on insanity," makes use of the term, "lypomania," from a word which means to render sad, and mania a synonym of melancholy. He says: "The word melancholy employed in the language of common life to express that habitual state of sadness from which some people suffer, should be left exclusively to moralists and poets, who in their signification are not obliged to employ so much precision as physicians." In this manner the usage of the two terms, melancholia and mania, fluctuated until the application became definitely settled upon conditions respectively associated with depression and elated excitement.

For centuries it has been known that certain cases of insanity, which were subject to outbursts of excitement, would have these attacks at shorter or longer intervals during which the patients would be lucid or apparently normal. The same was observed with regard to depression. Hippocrates had even observed that attacks of maniacal excitement would sometimes begin with a melancholy disposition. In more recent times it was found that melancholy spells would develop in cases where previously the attacks had been of a maniacal character. This led to the epoch-making publication by Falret in 1851, of his folie circulaire, which three years afterwards was pronounced a disease-entity by Falret and Baillarger, independently of each other. Diagnosis in psychiatry had in all cases been symptomatic prior to the publication of this work by Falret with the exception of the classical research by Bayle on general paralysis, made about thirty years previously. These two investigators were the first to apply the clinical method to the study of mental diseases. The symptomatic classification named these diseases from some prominent symptoms without due regard to etiology, detailed symptomatology, course and termination. In a paper, "On the methods of later psychiatry," Dr. Clarence B. Farrar says: "Not diseases, but individuals, should be the prime objects of study, not the ability to discover symptoms sought which shall go to make up an external pathological entity, but rather to appreciate in its nature the diseased personality by establishing its variations, fine and coarse, in all the phases of mental life, not from an arbitrary norm, but from the 'norm of the individual himself,' which may depart widely from any given average, and which must be determined anew in each succeeding case. The dangers, however, of metaphorizing symptom-complex into disease-entity are shown no better than by following the part which the amentia of Meynert has played in the history of insanity. During the first decade after it was described in 1881, the diagnosis of amentia found astoundingly increasing favor until in numerous clinics it came to cover perhaps half the cases." In this manner the introduction of new symptom-complexes has

led to a redistribution of the percentages of cases under the new class. Such an accumulation of cases under one heading took place when the appellation, paranoia, was extended until it spread its winys over a number of subforms.

Instead of studying isolated phenomena and placing undue importance upon them Kraepelin followed along the lines of Falret's ideas of circular insanity, making a synthetic study upon a broad and comprehensive basis of the forms of psychosis previously classified under mania proper, melancholia proper, the periodical and circular insanities and a number of transitional forms, grouping them into one large unit or group, the so-called Manisch-depressives Irresein or manio-depressive insanity. The variability of these different forms was found to be due to the varying force with which the fundamental elements of thought, sensation and motility enter into the pathological state of the affects. Under this influence the disease-picture may vary greatly, according to the degree of impulse acting sometimes upon one, sometimes upon another of these elements, leading to the development of a disease-picture of elated excitement or depression, or these conditions may be present alternately in the same attack.

It is characteristic of this group that the attacks terminate favorably, but leave behind a disposition to renewal of the attack, and that transition into other forms of mental disease, such as general paralysis, exhaustion-psychoses, mental enfeebleness or paranoia are not met with.

As to the clinical characteristics of the cases brought together under the head of manio-depressive insanity, we find that the perceptive faculty is only in the mild cases uninfluenced. When the excitement is vivid, it suffers because of the greater susceptibility to diversion, so that the patient is stimulated by every impression without being able to give it proper mental elaboration. Such cases do not show increased attention, on the contrary the apperception is diminished, the units of perception are loosely joined together, reminding one of conditions in fatigue or alcoholic stimulation. During the depressive phase, the conception of what has been perceived is much impeded. Hallucinations are not frequently observed, illusions only now and then. The fleetness of the apprehension facilitates the development of false perceptions—persons and objects are misjudged. There is a disturbance of mental associations.

In mania there is in every concept, according to Kraepelin, a loose connection between the sound picture and its optic written-picture and the motor-speech idea of every word. The association process is not accelerated, as might appear at first glance; the development of the speech-idea is simply facilitated as compared with the elaboration of the concepts. The patients commence to rhyme, make witty remarks, declaim, sing, etc. These fleeting thoughts do not have a fixed aim or object, but stray away, changing the theme with each new external impression, leading to flight of ideas, which in very acute cases may become a flighty confusion.

In exact contrast to the flight of ideas we find a thought-inhibition (*Denk-hemmung*) which may be more or less marked during the depressive phase and in certain mixed forms of manic stupor. The various ideas are developed slowly and only upon forced stimulation—the trend of thought progresses with difficulty. The patients hesitate and are slow in collecting their thoughts.

The mood is usually elevated during maniacal excitement. The patients are jolly, laugh, sing, make fun of everything, the condition of the mood varying from quiet cheerfulness to ungovernable mirth, the latter being often interrupted by outbreaks of anger characterized by the most inconsiderate scoldings and disposition to violence. At the same time the mood shows a tendency to make a remarkably quick change to sadness or lachrymoseness, although usually only for a short time. This observation has been taken by Kraepelin to show the close relationship of the maniacal and depressive states. During the latter the disposition is regularly gloomy, hopeless, despairing or anxious, although there probably are cases where the inhibition or resistance is not associated with any marked coloring of the emotions. The patients in the state of depression often have a feeling of loss of internal emotional response. To them everything seems deserted, empty and indifferent. During states of excitement the disease-picture is controlled by a tendency to be busy and to talk. They make jests with those around them, are full of mischief, sing, dance, and decorate themselves with rags, etc. In spite of this excessive motor excitement, which may last for weeks and months, the patients seem to lack a feeling of fatigue, probably in part on account of a dulled sensitiveness, and in part because of the ease with which the central liberation of the movements takes place. The same is true with regard to the talkativeness and maniacal flight of ideas, which finally lack logical connection, becoming what has been termed *logorrhœa*. The handwriting shows the same flightiness, its character varies, the strokes become larger and more hasty, show underscorings, etc. During the phase of depression the contrast of this craving for activity sets in in the form of psychomotor inhibition. The central liberation of acts becomes impeded until activity is entirely done away with, irresoluteness resulting in the mild cases, while in the stuporous forms there is a complete absence of expressions of will-power. These psychomotor disturbances have been studied by Kraepelin by means of a special apparatus (*Schriftwage*), the force and the duration of the muscular movements being graphically recorded and measured, showing marked contrasts in the character of the writing during the periods of depression and excitement. Judgment is quite superficial in mania. The apparent quickness at repartee and witticisms do not reach beyond the level of social chat. Delusional expressions sometimes reveal themselves, although they may not be expressed in earnestness. The patients often apply all sorts of names and titles to those around them; even grandiose ideas are met with in maniacs, reminding one of the demented

delusions of general paralytics, while feelings of insufficiency, ideas of persecution and sinfulness develop in the depressed state. The memory is usually found intact, if one can once get the attention and responses from the patients. Amnesia is only present in cases of extreme excitement and confusion. The facial expression in mania shows all the intermediate states from that of good humor, jolliness and hearty laugh to those of boisterousness and the most ungovernable outbursts of laughter or of anger and irritability. During depression the mien is sober, sad, grave—seldom anxious. The body weight diminishes during the excitement quite considerably, sometimes 50 per cent. Constipation and vomiting spells are sometimes present, which latter in states of depression may be voluntary and practiced to such an extreme as to make nourishment where tube feeding is required very difficult. The appetite is quite good as a rule in maniacs, while during depression one may have to resort to forced feeding. The tongue is more or less coated. The pulse-frequency and respiration are sometimes normal, sometimes increased in mania, decreased in depression. The blood-pressure is in mania low, in depression high. There is a slight rise of temperature in mania—.6° (C) in the evening, .2° in the morning. Vasomotor disturbances, such as cyanosis of fingers and face, are sometimes observed in states of depression. Symptoms of hysteria and other evidence of changes of the nervous system are met with. Headache, noises in the ears, vertigo, præcordial anxiety and disturbances of sensibility may be present. Stuporous cases often show complications of tuberculosis and pleurisy. Maniacal excitement is usually preceded by a prodromal state which may last days or weeks and during which headache, loss of appetite and sleep, and often expressions of despondency are noticed. This is then followed by a change to an elated mood; a motor restlessness sets in and the patient has new and great plans to carry out, becomes talkative, etc. The milder forms have been termed *hypomania* (*Mendal*), the mildest, *mania mitis*. The inexpedient name, *mania sine delirio*, and the French term "*folie raisonnée*" have been applied to forms of hypomania as signifying an insanity without disturbances of the understanding. In the more acute forms, *mania gravis acuta*, "*Tobsucht*," the patient becomes raving, noisy, destructive, violent and confused, hallucinatory and delusional. Still another form not, however, often met with, of a delirious nature (*mania deliriosa*) is characterized by rapid development, dream-like clouding of consciousness with numerous hallucinations and confessed delusions. Kraepelin describes this form as having a sudden onset, one or two days, seldom weeks, and of comparatively short duration—a few days or at the most three or four weeks. The cases usually quiet down rapidly, recovering after some weeks with more or less amnesia of the past. The more common forms of maniacal excitement are slower in improving, and frequently we find insertions of gloomy depression and even temporary stupor, a demonstration which Kraepelin says gives us an understanding of the so-called

mixed forms. While the duration of the average case may be a few weeks, it frequently lasts months and now and then two or three years. The disappearance of the maniacal excitement is followed by a more or less pronounced period of prostration and despondency, which has been looked upon as exhaustion from the severe illness, but which has been regarded by Kraepelin and his pupils as a reversal to the depression characteristic of the disease-entity.

The depressive phase shows mainly the three fundamental symptoms above mentioned; gloomy depression, psychomotor inhibition, and inhibition of the associative processes.

The mildest forms present simply psychic inhibition without hallucinations and without pronounced delusions. Thought-activity is impeded, the mood is gloomy, hopeless. The patient has no aim in life, doubts the existence of God, is disinherited by fate; compulsory ideas often come to the surface, he worries against his will, and is forced to think of obscene sexual ideas in connection with the crucifix or other religious pictures, etc. There is marked loss of energy—he is without courage and without will-power. The least exertion is performed with difficulty. It is for this reason that attempts at suicide are not so common even in cases in which the patient wishes he was dead. As inhibition diminishes and energy returns, despondency still existing, attempts at suicide become more frequent and dangerous, and this may be so, even at the beginning of convalescence. In spite of the marked impediment to apprehension and thought-activity, and in spite of the existence of fallacious ideas, the lucidity and orientation are intact, the patients have in fact usually a vivid realization of sickness, even sometimes a certain disease-insight—sometimes speak of themselves as being crazy.

In severe cases of psychic inhibition a pronounced stupor develops, depression with stupor. The patients are unable to comprehend the impressions from their surroundings, are unable to elaborate them, do not understand the questions put to them and have no idea of their situation.

With these symptoms we find in a third group of cases, various fallacious ideas especially of sinfulness and persecution, which sometimes assume a hypochondriacal tone called depressive Wahnsinn (depression with delusions). In some of the cases complicated with delusions the consciousness becomes clouded—the patients sink into a dream-state (*Daemmerzustand*). Besides the maniacal and depressed states we meet with mixed states in which symptoms of each phase are intermingled in the case at the same time.

(a) Weygandt speaks of (4) a maniacal stupor in which a psychomotor inhibition is combined with an elated, maniacal mood where usually an inhibited thought-activity takes the place of the flight of ideas.

(b) An agitated depression, corresponding to the melancholia agitata, the negative picture of the manio-stuporous state, in which we find a gloomy mood combined with excitement and flight of ideas; often an intensely depressive state of the affects with

suicidal ideas; disposition to self-mutilation, refusal of food, self-accusations—the patient being at the same time easily diverted.

(c) A third form he calls unproductive mania in which an elated mood is associated with psychomotor excitement and impeded or impoverished thought-activity—i. e., mania with thought inhibition.

(d) Finally he speaks of atypical mixed states—for instance, depression with inhibition and flight of ideas, instead of impediment of thought-activity.

Manio-depressive insanity is frequently observed among the insane. Kraepelin found it in 10 to 15 per cent of his admissions, and the cause lies chiefly in a neuropathic disposition. Hereditary disposition was found by Kraepelin in 80 per cent of his cases. The disease sets in in more than two-thirds of the cases before the age of twenty-five years, especially as regards the female sex. The development of the disease is as a rule independent of external influences. Diseases with fever, surgical operations, etc., may occasionally play a secondary role. That this is so is best shown by the disposition of the disease to repeat itself. I have seen a case (a young man) pass through eleven distinct attacks during the first year of the disease followed by an increase in the length of the free interval as the disease progressed, the first attacks recurring almost as regularly as the menses of a woman. In another case I could trace the maniacal and depressive phases at irregular intervals over a period of over fifty years, the history in this case showing a gradual diminution in the duration of the free interval. This periodicity has given to the disease in the past the names of periodical insanity, periodical mania, periodical melancholia and circular insanity, periodical paranoia. While the attacks repeat themselves, they vary greatly in character, duration and intensity. The beginning of the disease is in 60 per cent of the cases a depressive phase, especially in young women. The duration of the individual attacks varies greatly. Some last but eight to fourteen days—undoubtedly morbid mental depressions or excitements have even been known to run their course in one or two days, but as a rule a single attack lasts six to eight months. On the other hand, attacks have been known to last through two or even three to four years. Kraepelin even saw one case terminate in recovery after seven, another after ten years. While the disease is characterized by periodicity, one single attack during life is met with. Weygandt found it in 4 per cent of his cases.

As to the nature of manio-depressive insanity very little is known. The frequent relapses and great variability in the character of the attacks are unsolved phenomena. Meynert has attempted to explain them as based upon periodical disturbances of the state of irritability of the cerebral vasomotor centers leading to an increased or diminished quantity of blood flowing to the brain—i. e., first producing an anemia as cause of the depression, which in turn is supposed to lead to defective nutrition and paralysis, and in consequence cerebral hyper-



æmia, which is said to be the underlying cause of the maniacal excitement. The great variation in body weight might lead one to suspect that metabolic disturbances may play a role; and (5) Carl Lange has in fact described peculiar periodical states of depression with psychic inhibition in which there was a decided uric-acid diathesis. (6) Albrecht claims to have found that one-third of the cases of manio-depressive insanity of all ages show arterio-sclerosis, while cases of alcoholism show it in only 40 per cent of the cases, and quiet patients of dementia præcox in only 10 per cent. Arterio-sclerosis sets in earlier in cases of manio-depressive insanity than in the more quiet class of patients—in one-third of the cases between forty and fifty; in one-half between fifty and sixty; while in dementia præcox it begins beyond sixty years.

(To be Continued.)

### THE UNDERLYING CAUSES OF RHEUMATISM.\*

By ROBERT CREES, M. D., Paso Robles.

In discussing the underlying causes of rheumatism, it is necessary to carefully consider the present scope of the term, and to remember that its use is not now confined to the pathological condition for which the name was coined, but has been extended to embrace many different pathological processes. In fact, its limits of application in painful or inflammatory affections of muscles, nerves or joints are restricted only by our ability to discover causal factors in these affections that would render a diagnosis of rheumatism unnecessary. In this sense, therefore, the term expresses not a disease but a group of symptoms, one or more of which may result from numberless diverse pathological processes.

These symptoms are pain, tenderness to pressure, and inflammatory swelling in the neighborhood of joints. Constitutional disturbances usually accompany the inflammatory conditions, but pain alone, or pain accompanied by tenderness of the painful parts, or by muscular stiffness without tenderness, may exist without giving rise to any appreciable general disturbance, and herein lies the distinctive difference between the various forms of so-called rheumatism.

If, therefore, we are to consider the application of the term rheumatism in its present broad scope, no single etiological factor can account for the great degree of variance in symptoms, and it becomes necessary to speculate on the possible causes of these symptoms. There are, of course, numerous well-known diseases with symptoms readily mistaken for those of rheumatism, yet even if we exclude all diagnostic errors from this source, there still remain at least four different conditions that may produce the symptoms of rheumatism. They are infection, in-

testinal autotoxæmia, metabolic disturbances and arterio-sclerosis.

That infection is one of the causes of rheumatism, particularly of the acute and subacute articular types, is now a well established fact. The only question to be settled regarding the etiology is whether the symptoms are due to a specific micro-organism, sometimes acting alone and sometimes in conjunction with other infectious organisms, or whether any of the infectious micro-organisms might not under certain conditions give rise to the articular outbreaks. Recent investigations strongly favor the theory of a specific etiological agent, the investigators contending that, where the symptoms occur as a complication of other infectious diseases, they are due to a mixed infection, the specific agent of rheumatism being superimposed upon that of the original infection, the joint symptoms resulting from the new infection. This of course only holds good for typical acute and subacute articular rheumatism.

There are articular inflammations that we know to be due to the presence in the joints of certain other microbic agents, such as we find in gonorrheal and pneumococcic inflammations, but here the whole course of the disorder is entirely different from that of articular rheumatism, and should not be classed in the same category. That an infectious foci can not always be detected in these cases, is no proof that it does not exist. Careful examination will oftentimes enable us to discover it in the most unlooked-for localities, such as the nasal sinuses, nasopharynx, etc. The gastro-intestinal canal may furnish the infection, and it may even be presumed that the smoldering elements of infection be present on cardiac valves damaged by previous attacks of rheumatism. Very small foci of infection are capable of furnishing sufficient toxins to produce articular and constitutional symptoms, as in a case of obstinate subacute rheumatism, where several small pustules were discovered accidentally on the patient retching during an examination of the mouth. The pustules were situated at the apices of both tonsils, hidden by the pillars of the fauces, and only to be seen when carried forward by the effort at retching. As rapid recovery from the rheumatism symptoms followed the puncture and treatment of these pustules, it was presumed that they were the source of the infection. There is one point worthy of notice in relation to the infectious forms of rheumatism. It is that they are usually of an articular type, and are accompanied by certain symptoms common to infectious diseases—i. e., fever, sweating and leucocytosis. On the other hand, the muscular affections and the neuralgic conditions that are for want of a better name classed as rheumatism, frequently run their course without any apparent constitutional symptoms whatever, and leucocytosis is the exception rather than the rule. As they bear none of the marks of an infectious disorder, we must look to other than infectious causes for their origin. Disturbed metabolism may cause the production of substances that are capable of giving rise to painful

\* Read at the Thirty-seventh Annual Meeting of the State Society, Del Monte, April, 1907.

and inflammatory lesions, as in gout and oxaluria, and it is within the bounds of possibility that many other poisonous substances may result from faulty digestive and metabolic processes, which finding their way into the general circulation, thus produce the indefinite symptoms of muscular rheumatism.

But few words are necessary in closing to illustrate the arterio-sclerotic type of rheumatism. It occurs in elderly individuals in whom the signs of senile decay are plainly evident and is characterized by more or less constant pain of the extremities, particularly the feet and legs, and is accompanied by muscular stiffness. The pains and stiffness are most evident on attempting to walk after resting, but improve somewhat on moderate exercise; are not troublesome at night when the patient is in bed; are not accompanied by constitutional disturbances, nor any marked blood changes, although in some cases there may be indications of interstitial nephritis. The symptoms in these cases I have always looked upon as due to senile arterial changes.

### MEDICAL TESTIMONY.

Abstract of a paper by Dr. S. B. Lyon, San Jose, read before the Santa Clara County Society.

The author calls attention to the present unfortunate and rather humiliating condition into which medical expert testimony has fallen, and points out the manner in which the average physician when placed on the witness stand is made to appear as the mere plaything of the attorneys in the case. He does not believe that this is due to the fact that the average physician knows less medicine than the best lawyer, but he believes that it is due to the fact that the average lawyer prepares himself most carefully and, on the particular points at issue, is in court a better physician than is the best physician a lawyer. In other words, the physician seldom tries to know well the relation of his profession to the law. And I therefore bring before you to-night the following points on medical testimony for discussion:

1. The scope of medical science has so broadened that none of our best colleagues can claim to-day to be a specialist of all its respective branches.
2. The principal qualification for a medical witness that the law prescribes at present is "ordinary skill."
3. No case of medical testimony shall be undertaken before a perfect knowledge of the case is arrived at.
4. The physician and attorney of the same side of the case shall have a thorough consultation before the case comes up, in which the physician shall inform the attorney of all the probabilities of the testimony.

5. When the physician takes the witness stand he shall bear in mind three successful examinations before his testimony will gravitate the scale of justice in favor of the side he was a witness for. These examinations are:

(a) The direct examination by the counsel for the side on which he appears. In this examination, whether he is to testify as to fact she has observed as a result of an examination, or as to the expression of an opinion in answer to a hypothetical question, his answer shall be short, using plain words to express his ideas, in a loud, clear voice, and be positive in his statements as to location, measurements, dates, personal observation and opinion. No hear-

say or citation of a case to be used for the support of his opinion.

(b) The cross-examination by the opposing counsel. In this examination he shall collect all his powers and control his senses, to be cool, and not to forget for one moment that he is authority himself, and is not before a board of examiners to obtain his license to practice. He shall have his attorney at his side, and on his feet to object to any question that does not pertain to the case. He shall not lower his dignity to volunteer discussion on all topics of medicine with a layman, but gently and coolly advise his cross-examiner to take a course for that in the proper place equipped for that purpose. He shall by all means ask the court to modify the answers "yes" or "no," which the cross-examiner likes to take advantage of. To any authority quoted to him by the cross-examiner, even of his own beloved great teacher, he shall consider his own authority the best.

(c) The re-examination by first counsel. This examination is either for the explanation of some variations in the cross-examination, or to enter the gates opened by the careless cross-examiner. In this examination he shall be especially careful not to introduce any new facts or theories in addition to what has been stated in the direct examination, as this would render him liable to a further cross-examination.

6. Whereas the domain of medicine, as stated in paragraph 1, has so broadened that every branch of it constitutes a specialty in itself, the medical organizations of the different states shall request their respective legislators to pass a law that only specialists in their respective branches shall be eligible to testify as experts, and shall receive a remuneration for their services, prescribed by their respective fee bills, whether called by the state or otherwise, and not as some of the states consider, that the special skill of a physician is not his personal property (Alabama, Arkansas, Colorado, Illinois, Minnesota and Texas). See A. N. Taylor, page 172.

7. All the medical societies at their regular meetings shall from time to time consider the question of medical testimony and as much as possible bring their members to accord, so as to avoid controversy with their colleagues on the witness stand. This could be brought about by the following:

(a) To promote a more fraternal feeling towards each other through the influence of the medical society.

(b) Opposite medical witnesses shall consult and deliberate upon the merits of the case before they take the witness stand.

(c) Each of us shall seek for fame mostly in the midst of our medical society, every member of which shall extend his hand of charity and good feeling to encourage and assist his colleague in every way he can.

### COUNTY SOCIETIES.

#### LOS ANGELES COUNTY.

At the meeting of the Los Angeles County Association held October 11th, the general subject of discussion was plague. Dr. C. B. Nichols delivered the principal address, and reviewed the etiology, pathology, symptoms, modes of transmission and prophylaxis. The discussion was further continued by Dr. N. K. Foster, Secretary of the State Board of Health, who dilated upon what was being done in San Francisco and elsewhere to limit the spread and eventually eradicate the disease. It was further discussed by Dr. Brooks of the Marine Hospital Service and Dr. Powers, health officer of the City of Los

Angeles. Dr. F. C. E. Mattison and Dr. Albert Moore called the attention of the association to the fact that the City Council was apparently about to reduce the working force of the health department, and intimated that this was intended for political reasons. In view of these facts, the following resolutions were adopted:

WHEREAS, The Los Angeles City Council for some unknown reason have passed an ordinance abolishing three sanitary, two milk, one lodging house and one quarantine inspector, the Los Angeles County Medical Association deprecate such action as it seems both unwise and unsafe, especially at this time when we are threatened with an outbreak of bubonic plague;

THEREFORE, BE IT RESOLVED, That it be the sense of the meeting that the Los Angeles County Medical Association condemn any such action by said body;

AND BE IT FURTHER RESOLVED, That a copy of these resolutions be presented to the council at its meeting tomorrow morning, also that a copy be sent to the mayor and the public press.

A committee of five, consisting of Drs. George L. Cole, Stanley B. Black, James P. Booth, C. B. Nichols and F. W. Steadom were appointed to attend a meeting of the council on October 12th, and in the name of the association protest against any reduction in the health force at this time. This committee was supported by the mayor and city health board, and the results of its efforts were entirely successful. No reduction was made in the working force of the health department; in fact, \$20,000.00, above ordinary expenses was appropriated for general cleaning up of the city.

#### SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at the residence of Dr. C. R. Harry, September 27, 1907. Dr. Hammond in the chair; Dr. R. B. Knight was appointed secretary pro tem because of the absence of Dr. B. J. Powell, who had been unexpectedly called out of town. The minutes of June 28th were read and approved. Members present were: Drs. R. R. Hammond, C. R. Harry, Minerva Goodman, Mary C. Taylor, Margaret H. Smyth, H. E. Sanderson, J. D. Dameron, H. N. Cross, J. P. Hull, F. R. Clarke, S. W. R. Langdon, E. A. Arthur, W. W. Fitzgerald, A. W. Hoisholt, E. L. Blackmun and R. B. Knight. The name of Dr. B. F. Walker was proposed for membership by Drs. Hull and Cross and referred to the usual committee.

The Bubonic Plague situation was informally discussed by the members present. The president appointed a committee consisting of Drs. Langdon, Arthur and Harry to act with the State Pure Food Commission. The paper of the evening was read by Dr. Harry entitled "A Case of Appendicitis With Unusual Complications," and was widely discussed by those present. After refreshments the Society adjourned.

R. B. KNIGHT, Secretary Pro Tem.

#### SANTA CLARA COUNTY.

The regular society meeting was held October 16th with the following present: Drs. Osborne, Jordan, Ulrich, Belknap, Snow, Hopkins, Newell, Cooper, Beattie, Asay, Whiffen, Paul, Simpson, Kapp, Wagner, Harris, Hervey, Walter and Park.

Dr. Wm. Simpson presented a very able paper on "The Plague," giving particular attention to the different forms assumed by that malady. (See The Journal, this issue.)

Drs. Asay and Beattie told of their experiences with the plague, during their residence in the Orient.

Members of our San Jose Board of Health told of their work of cleaning up our city so as to prevent as far as possible any chance of the disease getting a foothold here.

On November 2d we meet with the San Benito County Medical Society at San Juan and a large delegation will go to that city.

K. C. PARKS, Secretary.

#### SANTA CRUZ COUNTY MEDICAL SOCIETY.

The following resolutions are very timely and worthy of careful consideration and endorsement by other county societies:

WHEREAS, It seems to be a common custom among Druggists to prescribe for any person applying to them for medical aid; and whereas the larger part of such prescriptions call for some one of the so-called Patent Medicines; and whereas such prescribing places the value of patent medicines as of more efficacy in the estimation of the patient than the medicines prescribed by the regular authorized physician; and whereas such druggist prescriptions work a financial hardship on the physician, and at the same time is of no advantage to the druggist; therefore

"BE IT RESOLVED, That the Santa Cruz County Medical Society, in regular session, Oct. 7, 1907, dose condemn the practice of druggists prescribing, and will, as far as possible, discontinue its patronage of those drug stores which continue to prescribe any remedy whatsoever.

"BE IT FURTHER RESOLVED, That the Secretary of the Santa Cruz County Medical Society be and is instructed to send a copy of these resolutions to every druggist in Santa Cruz County."

#### SHASTA COUNTY.

Proceedings Shasta County Medical Society, October 19, 1907.

Shasta County Medical Society met in regular session at Mammoth Copper Co. Hospital, Kennett, Cal., October 19, 1907, the Society being the guest of Dr. C. J. Teass.

The morning session was taken up with visiting the hospital, which is one of the most up-to-date in Northern California. Dr. C. F. Welty of San Francisco, performed a mastoid operation, which was much appreciated by all present, after which a chicken lunch was served. President R. F. Wallace presided at the afternoon session and the following papers were presented:

1. Indications for operation for chronic mastoiditis and suppurative conditions of the middle ear, Dr. C. F. Welty, San Francisco, Cal.
2. Diagnosis of typhoid perforation, Dr. E. J. Cornish, La Moine, Cal.
3. Sporadic dysentery, Dr. A. B. Gilliland, Cottonwood, Cal.
4. Gonorrhea, Dr. S. T. White, Redding, Cal.
5. Injuries to the Chest, Dr. B. F. Saylor, Redding, Cal.

After a lively discussion of all papers the business meeting followed. The treasurer's report for the past year was read and adopted.

Drs. J. P. Sandholdt, Wm. C. Tuckerman, A. A. Milliken and M. G. Varian were elected to membership.

It being the time for the annual election of officers, the following were elected:

- President, Dr. C. J. Teass, Kennett.  
 Vice-President, Dr. B. E. Stevenson, Redding.  
 Secretary-Treasurer, Dr. Phil. H. Weber, Redding.  
 Executive Committee, Drs. E. J. Cornish, S. T. White, R. F. Wallace.  
 Trustees, Drs. Robt. T. Legge, C. E. Reed, J. H. Soothill.

A vote of thanks was given Dr. C. F. Welty for



his kindness in coming to Kennett and operating before the society; to Dr. H. B. Graham for providing the patient and to Dr. C. J. Teass for the excellent entertainment he had provided for us. A visit was then paid to the immense smelter of the Mammoth Copper Co., which appealed greatly to all, after which we returned to the hospital, where an elaborate turkey dinner awaited us and to which all did justice.

The following were present: Drs. Wallace, Saylor, White, Lawry, Stevenson, Weber, Soothill, Varian, Gilliland, Cornish, Milliken, Frizell, Teass, Graham, Tuckerman, and Sandholdt, and all state it was the best meeting in the Society's history.

PHIL. H. WEBER, Secretary.

## PUBLICATIONS.

**The Rise of Man. A Sketch of the Origin of the Human Race.** By Paul Carus. The Open Court Publishing Company, Chicago, 1907.

**Diseases of the Rectum. Their Consequences and Non-Surgical Treatment.** By W. C. Brinckerhoff, M. D. Orban Publishing Co., Chicago, 1907.

**Plant Breeding. Comments on the Experiments of Nilsson and Burbank.** By Hugo de Vries, Professor of Botany in the University of Amsterdam. The Open Court Publishing Co., Chicago, 1907.

**A Practitioner's Handbook of Materia Medica and Therapeutics Based Upon the Established Physiological Actions and Indications in Small Doses.** By Thomas S. Blair, M. D., Member American Medical Association, Pennsylvania Medical Society, Harrisburg Academy of Medicine, Member Visiting Staff of Harrisburg City Hospital, etc. Published by The Medical Council, 4105 Walnut Street, Philadelphia, 1907.

**Woman in Girlhood, Wifehood and Motherhood. Her Responsibilities and Duties at all Periods of Life. A Guide in the Maintenance of Her Health and that of Her Children.** By Myer Solis-Cohen, A. B., M. D., Instructor in Physical Diagnosis, University of Pennsylvania; visiting physician to the Hospital for Diseases of the Lungs, Chestnut Hill; assistant physician to the Philadelphia General Hospital; physician to the Children's Dispensary of the Jewish Hospital, Philadelphia. The John C. Winston Co.

**A Text-Book of the Practice of Medicine for Students and Practitioners.** By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; physician to the Jefferson Medical College Hospital; one time Professor of Diseases of Children in the University of Pennsylvania, etc. Lea Brothers & Co., 1907.

The appearance of a new edition of this text-book does not call for an extended review, since both the scope and the manner of presentation of the earlier edition are already well known. The general arrangement of the subject matter is, for the most part, like that of the average book of its kind. In some respects this is very unsatisfactory and inconsistent. Thus, in the opening chapter on infectious diseases, are included diseases due to known

bacteria, as well as diseases the etiological factor of which is unknown; as measles, smallpox and yellow fever; any or all of which may be due to an animal parasite. Toward the end of the book may be found the section devoted to diseases due to animal parasites, like malaria, African lethargy and filariasis. Malaria is certainly an infectious disease if yellow fever is to be included in that class. All the evidence certainly points to the latter being a disease of protozoan origin.

In the rewriting the author has made excellent use of the results of recent investigations. This is noticeable in many places, particularly in the discussion of infectious diseases, notably those met with in tropical climates. The amount of space given to the latter undoubtedly reflects the increased interest in them largely stimulated by the late territorial acquisitions of the United States. Criticism of unimportant details would hardly be justified in face of the general excellence of the work as a whole.

A. J. L.

## Hints on the Management of Commoner Infections.

By R. W. Marsden, M. D., M. R. C. P., D. P. H. Honorary Physician to the Ancoats Hospital, Manchester; Honorary Assistant Physician to the Manchester Hospital for Consumption; formerly Medical Superintendent Monsall Fever Hospital and Clinical Lecturer in Infectious Diseases, Owens College. E. B. Treat & Company, 1907.

This small volume of 128 pages contains a resume of the principles of treatment to be observed in the management of infections or intoxications which are due to the direct or indirect action of micro-organisms. The book is written for practitioners and students. Written in unusually good English, the manual also has the advantage of being extremely well printed. The opening chapter considers general measures employed in handling fever cases. The condemnation of the routine use of antipyretic drugs will receive the support of intelligent practitioners. Of the use of alcohol in fevers the author says: "It may be of value as an occasional stimulant, but even under such conditions it is questionable whether, in cases where a repetition is likely to be called for, its beneficial effects can be compared to the result obtained from a fomentation or stupe applied to the precordial region in some cases, or to favorable effects of a hot or mustard pack in others." The bulk of the volume is given to a discussion of the treatment of specific infections. In this part, nor elsewhere, do we find any reference to Wright's method—the so-called opsonic method. Finally the work is concluded with an appendix containing practical directions for isolation and disinfection.

A. J. L.

**A Treatise on the Principles and Practice of Medicine.** By Arthur Edwards, A. M., M. D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Northwestern University Medical School, Chicago; Attending Physician to Mercy, Welsey Hospitals, etc. Lea Brothers & Co., 1907.

This large volume of over 1300 pages is a new book on medicine written by a teacher and practitioner of long experience. Differing little in scope from many similar works, it presents the same traditional classification, although characterized, perhaps, by a clearer and more orderly arrangement than usual. Careful use has been made of types of various prominence to facilitate the finding of a topic and the appreciation of its importance. An unusual amount of space has been devoted to treatment, to the detailed consideration of drugs, and to numerous formulae and prescriptions. The reader

will also find a large number of tables giving the differential diagnosis of diseases likely to be confused, or in many instances of entire subjects, such as those of the liver and kidneys. The results of recent experimental investigations have been well incorporated in the text, and brief references to the historical side of the subject materially enhance the merits of the volume. On the other hand pathological anatomy is less satisfactorily handled. The purely clinical descriptions are generally good, particularly those of tuberculosis and typhoid fever. The section on diseases due to animal parasites is disappointing. Taken as a whole the author has accomplished his task well, and there is little doubt that the book will earn a merited success.

A. J. L.

**The New Hygiene Three Lectures on the Prevention of Infectious Diseases.** By Elie Metchnikoff. With preface by E. Ray Lankester. W. T. Keener & Co., Chicago, 1906.

This small volume of 104 pages contains the three Harben lectures delivered last year by Professor Metchnikoff on the Hygiene of the Tissues of the Alimentary Canal, and Hygienic Measures Against Syphilis. They may be read with interest and advantage alike by layman and medical man. Anyone who has a moderate acquaintance with elementary physiology can follow the author's exposition and enjoy the admirable method in which he establishes his views by citation of most interesting observations and experiments. Even to the well-read medical man these pages will furnish much novel matter of considerable importance, accompanied by references to the special publications of recent investigators, many of whom are pupils of the "Institut Pasteur."

The first lecture contains a remarkably clear and yet brief exposition of the essential facts regarding our knowledge of the defensive mechanism of the body tissues. From the reading it may be seen that Metchnikoff does not believe that the preparatory or opsonic influence is of fundamental importance in immunity. In support of this view he cites among other things the unpublished experiments of Loehlein. If it were true that the opsonic power of the sera was of paramount importance in immunity, one would expect to see it most marked in the sera of the least sensitive animals. But in reality this is by no means the case. Thus in Loehlein's studies the serum of guinea pigs, the animals most sensitive to anthrax, had a far higher opsonic power than in pigeons, which are much more resistant to anthrax. According to the author, therefore, no parallelism exists between immunity and the opsonic action. The influence of alcoholic excess in diminishing the natural defenses of the body also receives attention. The well-known experiments of Delearde, Abbott, Laitenen, Massart and Bordet form the basis of this part of the lecture.

The importance of the alimentary canal as a portal of entry for micro-organisms, as well as the role, in this connection, of entozoa, are ably championed by Metchnikoff. He accepts the view advanced by Desonbry, Porcher and Nocard, but more especially by Adami, Ford and Lartigau, that in ordinary health a certain number of bacteria pass, especially at the height of digestion, through the intestinal wall into the systemic blood. Considerable evidence is also brought forward to show that intestinal worms by wounding the gut establish infection. The views of the author as to the role of intestinal worms in the etiology of appendicitis are too well known for further comment. The part played by lactic acid producing bacilli in preventing the development of butyric and putrefactive ferments in the intestine is also discussed. Briefly, the point made by the

writer is that infectious agents are carried to the intestine chiefly by uncooked food or unboiled water.

The final lecture on Hygienic Measures Against Syphilis is chiefly devoted to the recital of experimental attempts at vaccination. It is shown that the virus of syphilis may be attenuated by serial passages through the *Macacus rhesus* so as at last to lose its virulence through this species of monkey. One person free from syphilis inoculated with virus attenuated in the manner described developed only slight local lesions of the disease. Other experiments show that calomel in the form of salve applied so late as 18½ hours to the inoculation point prevented the development of the infection.

A. J. L.

### GLORIOUS DEFEAT.

Very little explanation of the following letters is necessary. As several of the self-styled "independent" medical (?) journals have, somewhat gleefully, published the statement that Dr. Philip Mills Jones, the editor of the California State Journal of Medicine, applied for membership in the American Medical Editors' Association and was rejected, at its last meeting, he feels in duty to the society, bound to publish the actual correspondence, which shows that the application was put in reluctantly and only at the solicitation of Dr. Pilcher, president of the Association and of Dr. A. T. McCormack, secretary of the Association of State Journals, who thought it would be in the interest of harmony and for the welfare of the medical profession for the editors of the various state journals to join the Editors' Association, as requested. In passing, it may be said that the American Medical Editors' Association was for years largely made up of, and entirely controlled by, the very worst element represented in commercial medical (?) journalism, and the principal event of the yearly meetings was the annual drunk. In the last two or three years, however, a considerable number of good men have joined it and have done much to elevate the tone of the association and of its meetings. The first letter of the series was more or less of a circular letter and was, I believe, sent to all editors of state journals. As an invitation to join had been sent to the editor of the California State Journal every year for four or five years, no particular attention was paid to this one until the letter from Dr. McCormack was received. The correspondence is, I believe, sufficiently edifying without further comment.

PHILIP MILLS JONES.

(1.)

AMERICAN MEDICAL EDITOR'S ASSOCIATION,  
OFFICE OF THE PRESIDENT.  
CARLISLE, PA., MARCH 16, 1907.

(Dictated No. 5)

Dr. Philip Mills Jones, Editor California State Journal of Medicine, 2210 Jackson Street, San Francisco, Cal.

My Dear Doctor:

In some rather inscrutable way a sort of antagonism has arisen between the privately owned medical journals and the various association journals. As an association editor, I have been unable to find any real reason for such antagonism, or any reason why either the "independent" editors or the association editors should segregate themselves in opposition to the other party. It seems to me that all medical journalism has the same end—the development of the profession and the advancement of medical science.

I am particularly anxious that this fact should

be brought out at the ensuing meeting of the American Medical Editors' Association, which body has indicated its friendly attitude toward association journalists by the election of one of them to its presidency. Will you not join with me in the endeavor to develop a generous and charitable spirit among the medical journalists of our country, and to bring about an era of good feeling, which shall enable us all to pull together in the one common aim of assisting in the progress of our profession toward the highest point of scientific development?

Such alone is the mission of the American Medical Editors' Association, and such alone will be the results if the best men of the profession unite in the effort to materialize it.

Will you not then join the movement actively by identifying yourself with the membership of the Association, by engaging in the work of its meetings, by contributing to its program, and by giving it the benefit of your advice, experience and observations?

Earnestly trusting then that we may have the honor of your adhesion to the Association, the pleasure of your interested engagement in its activities and the honor of your presence at its meeting in Atlantic City, June 1st to 3rd inclusive, I remain, my dear Doctor,

Very cordially yours,

(Sig.) JAMES EVELYN PILCHER.

(2.)

BOWLING GREEN, KY., APRIL 3, 1907.

Dr. Philip Mills Jones, Editor California Journal of Medicine, San Francisco, Cal.

My Dear Doctor:

If you, Chase, Chandler, Jervey and Stephenson will join with us we will all go into the American Medical Editors' Association together. They are making a great deal of complaint that we are not in, and besides I am inclined to think that we would be able to accomplish something by heart to heart talks with the really good men that are in it. Please write me what you think of the matter. If you think it wise to join we will all go in together. I am writing today for application blanks and will mail you one when I hear from you. Cordially yours,

(Sig.) A. T. McCORMACK, Secretary.

(3.)

SAN FRANCISCO, CAL., APRIL 10, 1907.

Dr. A. T. McCormack, Bowling Green, Ky.

Dear Doctor:

I have your letter of the 3rd inst., referring to the proposition for some of us to join the American Medical Editors' Association. I have fought shy of this institution for five years. Two or three years ago I was invited to address this eminently distinguished association, but declined the invitation, as I was afraid that I would say things which would be unpleasant to the members. However, I have always been willing to take "program," and if you think that it will be of any advantage or will quiet the talk, for us to join, you may count me in. Certainly, if I ever attend a meeting and the opportunity presents, I will tell some of the distinguished members pretty nearly what I think of them and their publications.

Cordially yours,

(Sig.) PHILIP MILLS JONES, Secretary.

(4.)

BOWLING GREEN, KY., APRIL 22, 1907.

Dr. Philip Mills Jones, San Francisco, Cal.

Dear Doctor:

Drs. Chandler, Stephenson, Chase and Jervey have

agreed with us that it is a good idea to put in our application for membership in the American Medical Editors' Association. Will you not fill out the enclosed and mail it to Dr. J. E. Pilcher, at Carlisle, Pennsylvania? I am sure we can do these gentlemen some good by telling them what we are accomplishing with our journals. Dr. Simmons will go in with us.

Very truly yours,

(Sig.) A. T. McCORMACK.

(5.)

SAN FRANCISCO, CAL., APRIL 29, 1907.

Dr. A. T. McCormack, Bowling Green, Ky.

Dear Doctor:

Yours of the 22nd inst., has just reached me, enclosing the application for membership in the American Medical Editors' Association.

In response to your request, I will forward the application for membership to Dr. Pilcher. I must say that this dose of medicine is not particularly agreeable, but I will take it, and not make any more of a face over it than I can help.

Cordially yours,

(Sig.) PHILIP MILLS JONES, Secretary.

(6.)

SAN FRANCISCO, CAL., APRIL 29, 1907.

Dr. James E. Pilcher, Carlisle, Pa.

Dear Doctor:

At the request of some of the editors of the other State journals, I beg to hand you enclosed my application for membership in the American Medical Editors' Association, together with check in the sum of \$2.00.

Cordially yours,

(Sig.) PHILIP MILLS JONES, Secretary.

(7.)

CARLISLE, PA., MAY 4, 1907.

(Dictated No. 5.)

Dr. Philip Mills Jones, 2210 Jackson street, San Francisco, Cal.

My Dear Doctor:

I am very glad indeed to receive your application for membership in the American Medical Editors' Association, and shall have much pleasure in seeing that you are duly elected to membership. The next meeting will take place at Atlantic City on the 1st to 3rd inclusive, of June, on which occasion we trust that you will be able to be with us.

Very cordially yours,

(Sig.) JAMES EVELYN PILCHER.

(8.)

CARLISLE, PA., JUNE 11, 1907.

(Dictated No. 6.)

Dr. Philip Mills Jones, Editor California State Journal of Medicine, 2210 Jackson street, San Francisco, Cal.

My Dear Doctor:

I regret, more than I can tell you, the temporary failure of my proposal of yourself for membership in the American Medical Editors' Association. It so happened that upon the Executive Committee there were a majority of members who were not friendly to you, and, notwithstanding my own personal endeavors, I was unable to carry my proposition through. How much I am humiliated by this fact I can not tell you.

Under the new election, however, I believe that your friends are in the majority and should be very happy indeed if you would permit the applica-



tion to come up again at the next meeting and allow your friends to see that the proper action is taken. Trusting to receive an early reply and hoping for an assent to my suggestion, I remain, my dear Doctor, with best wishes.

Very faithfully yours,

(Sig.) JAMES EVELYN PILCHER.

(9.)

SAN FRANCISCO, CAL., JUNE 25, 1907.

Dr. James Evelyn Pilcher, Am. Med. Editors' Association, Carlisle, Pa.  
My Dear Doctor:

On my return to San Francisco, I find your letter of June 11th, referring to the rejection of my application for membership in the American Medical Editors' Association, which application was put in at your request.

Please allow me to assure you of my personal regard and esteem for yourself, and my appreciation of the humiliating position in which the majority of your Executive Committee placed you by their peculiar action. Please allow me to assure you that, personally, I have no feeling of resentment, pique, or animosity as a result of this action. My correspondence with Dr. McCormack will show very clearly that it was not as an individual that I applied for membership in the Editors' Association, but as the representative of the State Medical organization, whose Journal I have the honor to edit. The policy of this Journal is not merely dictated by myself, but has from its very commencement been supported by the entire Publication Committee (of which committee Dr. Harry M. Sherman has been a member for four years), and has on many occasions been confirmed and supported by the Council of our State Society and by its House of Delegates. In view of these considerations, and of the further fact that our Journal has been striving to secure merely simple honesty and truth-telling, it seems to me that the majority of your Executive Committee extended a gratuitous insult to the Medical Society of the State of California, and that I, as the editor of the Society's Journal, must therefore decline to permit my application to remain over another year.

Dr. Charles F. Taylor of your association was good enough to suggest to me that if my application laid over for one year, and if during that time I exhibited symptoms of good conduct by failing to call attention to some of the peculiarities of American medical (?) journalism, I might possibly be elected next year. As I believe there was no insult intended by Dr. Taylor in this suggestion, I do not go out of my way to resent it, but simply mention it in passing, as it seems desirable for you to be in possession of all of the facts in this connection which are known to me.

I must therefore ask you to return my application for membership, and to consider the incident as definitely and finally closed. Again with every assurance of personal regard and esteem, I remain,  
Cordially yours,

(Sig.) PHILIP MILLS JONES, Secretary.

(10.)

CARLISLE, PA., JULY 2, 1907.

(Dictated No. 5.)

Dr. Philip Mills Jones, 2210 Jackson Street, San Francisco, Cal.

My Dear Doctor:

I regret very much the necessity of returning the enclosed application, with my check for the fee forwarded by you. I am sure it is unnecessary for me to dwell upon this, but can not refrain from the expression of a hope that better conditions may prevail at some future time, when the American

Medical Editors' Association may include you among its honored members.

Very cordially yours,

(Sig.) JAMES EVELYN PILCHER.

(11.)

BOWLING GREEN, KY., JUNE 6, 1907.

The American Medical Editors' Association:

Gentlemen:—Upon the official invitation of your honorable president, sent us in our capacity as editors of a journal controlled and published by the medical profession of Kentucky, in an effort, as he suggested, to bring about such peace and harmony amongst American medical editors, as was compatible with differences of opinion as to methods of management, together with the editors of other State journals, we applied for membership in your organization.

Being informed that you have made an invidious distinction in accepting our applications, rejecting the honored dean of the editors of state medical journals evidently on account of his powerful advocacy of such reform in management as would indicate to the physicians of the United States that medical publications should be conducted in their interest and that of their patients rather than under the supervision of pharmaceutical advertisers, and with much personal respect for the many members of your association who stand for honorable journalism, we regret to inform you that we would consider it distinctly unfortunate for us, selected as we are by the physicians of our state, to accept membership in any organization which did not consider one who stands as squarely and fearlessly for the profession and against the commercial domination of medical journalism as Philip Mills Jones, as worthy of any honor in its gift. We, therefore, have the honor of declining to accept membership in your body, at this time,

Very respectfully,

(Sig.) A. T. McCORMACK,

Editor Kentucky Medical Journal.

(Sig.) L. H. SOUTH,

Business Editor Kentucky Medical Journal.

#### RESOLUTIONS PASSED BY THE LOS ANGELES COUNTY MEDICAL ASSOCIATION OCTOBER 4, 1907.

WHEREAS, The laws governing the practice of medicine in the State of California were enacted in order that only properly qualified persons be permitted to hold themselves before the public as being competent to treat sick and afflicted citizens;

AND WHEREAS, In the treatment of injury and disease, life and death are frequently involved;

THEREFORE BE IT RESOLVED, By the Los Angeles County Medical Association in regular meeting assembled, that inasmuch as the legal practice of medicine nearly always means the treatment of injured or sick citizens by ignorant, vicious or incompetent persons, that this association pledge to the California State Board of Medical Examiners its support in the work of ridding the State from quackery and charlatanism;

AND BE IT FURTHER RESOLVED, That the members of this association pledge themselves individually and collectively, to support and co-operate to the fullest possible extent with the California State Board of Medical Examiners in this important work, and that the president of this association be authorized to appoint an executive committee of three to collect funds and to take other necessary steps to properly represent the association in the enforcement of the medical laws of the State, and further be it resolved that copies of these resolutions be sent for publication to the medical press of the State of California.

**RESOLUTIONS BY THE AMERICAN PHARMACEUTICAL ASSOCIATION.**

To the Editor of the State Journal: At the recent annual meeting of the American Pharmaceutical Association the undersigned was directed to send you a copy of the following resolutions:

WHEREAS, The American Medical Association, the American Pharmaceutical Association and the National Association of Retail Druggists, together with many state and local organizations and journals in both professions, have been for some years endeavoring to bring about a return to the practice of medicine based on the pharmacopoeia, and

WHEREAS, The medical colleges are represented on the Committee of Revision of the U. S. Pharmacopoeia, and

WHEREAS, It is manifest to the thoughtful men both in medicine and pharmacy that a very large number of medical men might be better informed regarding the Pharmacopoeia as a book of reference and standards. Be it therefore

RESOLVED, That it is the sense of the American Pharmaceutical Association in convention assembled, that a great advance in the ethical practice of medicine and pharmacy will be made when the medical colleges make the Pharmacopoeia a prescribed textbook or book of reference and require a familiarity with it in their examinations.

RESOLVED, That we request the governing authorities of all medical colleges in the United States to put into force such a ruling in their respective institutions as will insure in future classes a well-grounded knowledge of materia medica and Pharmacognosy, as set forth in the Pharmacopoeia;

RESOLVED, That the general secretary be directed to transmit a copy of these resolutions to each medical college in the United States and to the medical and pharmaceutical press.

Yours very truly,

CHAS. CASPARI, JR., General Secretary.

**EXCERPT FROM ADDRESS BY DR. SOLOMON SOLIS-COHEN, PHILADELPHIA, AT THE MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.**

"For the last few years pharmacists and physicians working hand in hand, have set themselves to change some of their mutual errors and mistakes of the past. It lies not in the mouth of the physician to reproach the pharmacist nor in the mouth of the pharmacist to reproach the physician. We have erred mutually, we have erred together, and we are determined to redeem ourselves together. The mere trade in patent medicines, in frauds and fakes, the deceptions of all kinds, need not concern us. There are crimes outside of the ranks of medicine and outside of the ranks of pharmacy and we are not starting off on a general reform expedition. There are other organizations and other agencies for that purpose, but the movement to make the drugs—whether the product of the manufacturing houses or the product of the individual pharmacist—which are dispensed over the counter, upon our prescriptions, what they purport to be is one in which you and we have a common interest, and in which our patients have the greatest interest of all. I recognize and you recognize—we must recognize—that in the general progress of science and the general advance of discovery, and the general progress of the arts of manufacturing and preparation of crude pharmaceuticals there is abundant room for large manufacturing houses which devote themselves to specialties of various kinds.

"For example, how can the individual pharmacist undertake to prepare and supply the great group of animal extracts and serums, which now have such a large part in the therapeutics of today? And so even with various galenicals, alkaloids and

the like. There are many things which the retail pharmacist can not do as well as that establishment which possesses the proper facilities and which is thoroughly organized to do well on a large scale what can only be done imperfectly on a small scale. We all recognize that, and the American Medical Association has taken steps, individual physicians have taken steps, to place themselves in proper relation with the great manufacturing houses, which are a credit to American Pharmacy and to American business. We want to have the most cordial relations with them, so that these firms may be encouraged to prepare and offer to us for the benefit of our patients the best and purest and most definite pharmaceutical products. And yet, after all, there is a place, and there must be a place always for the individual pharmacist—the retail druggist, call him by whatever name you please; for the individual who practices as a scientific man the profession of pharmacy."

**REMARKS BY WILLIAM C. ALPERS AT THE LAST GENERAL SESSION OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.**

"As a matter of information I will state that the Alpers Chemical Company does business at No. 4 White street, New York, and prepares a proprietary article called Triacol which is advertised to physicians only. I personally, originated this article, but I have had for years no connection with the company except, that I am a small stockholder and director, and they use my name, I believe, for advertising purposes. The business management is entirely in the hands of the treasurer.

"In the article referred to, a copy of an advertisement in 'Ainslee's Magazine' is given, and it is this advertisement that aroused the disapproval of Dr. Jones, the editor of the California Medical Journal.

"He speaks of me as, 'a scheming proprietor, who has thrown off the mantle of decency,' and uses other disparaging language.

"I at once went down to the office of the Alpers Chemical Company, where I had not been for over a year, and investigated the matter. I found that a contract had been made with the publishing firm of Thompson & Company, and that they had put this and similar advertisements in their magazines. The contract was signed by an employee of the company, who is neither a pharmacist nor a physician, and was not aware that in doing so, he had acted contrary to the principle of the company.

"As soon as the error was discovered, steps were taken to discontinue the advertisements, and they have long since disappeared from the respective journals.

"This was done before the article in the California Medical Journal had appeared, and not in consequence of it.

"But, even if the Alpers Chemical Company had authorized these advertisements in good faith, I would not have known of it, nor could I be held responsible for it; for I have no more influence on the policy of this company than any of you have, or than that bottle on the table has."

**PURE FOOD COMMISSION NOTES.**

By GEORGE H. KRESS, M. D., Secretary, Los Angeles.

The organization of the Pure Food Committees throughout the State has been making splendid progress and through the co-operation of the County Medical Association Presidents, we have the great pleasure of announcing the following County Committees:

**County Pure Food Committees.**

Pasadena, Branch Los Angeles County Medical Association—Dr. Stanley P. Black, Dr. F. C. E. Mattison.

Los Angeles—Dr. L. M. Powers, Chairman; Dr. George H. Kress, Secretary; (Pasadena Branch) Dr. F. C. E. Mattison, Dr. Titian Coffey, Dr. Stanley P. Black; (Long Beach Branch) Dr. W. H. Jones; (Pomona Branch) and Dr. Jos. K. Swindt.

Long Beach, Branch L. A. Co. Med. Association—Dr. W. H. Jones, President (and Health Officer of Long Beach); Drs. A. C. Sellery and E. M. Freeman.

San Francisco—Dr. J. Henry Barbat, Dr. A. B. Spalding, Dr. Paul Castlehun and Dr. J. T. Watkins.

Santa Clara—Dr. J. J. Miller, Chairman, San Jose; Dr. Wm. Simpson, San Jose; Dr. Louis Belkman, Garden City Sanitarium; Dr. Ray L. Wilber, Stanford University; Dr. Clara A. Sylvia, Gilroy; Dr. A. E. Osborne, President.

Santa Barbara—Drs. Conrad, Sunburg, Rexwald Brown, Todd and Barry.

Hanford—Dr. Ralph Motheral, Drs. L. E. Felton and R. W. Musgrave.

Orange—Drs. Francis L. Bruner, President; S. D. Ball, Secretary; J. L. Beebe.

San Luis Obispo—Dr. E. L. Paulding.

Marin—Drs. J. Kuser, H. O. Howitt.

San Mateo—Drs. H. G. Plymire, A. F. Maine and Geo. C. Baker.

Sonoma—Drs. Robt. Inneo Browley and Elisha Toleman Gould.

Fresno—Drs. A. H. Aiken, W. T. Manpin and G. A. Hare.

Monterey—Drs. E. K. Abbott, J. Parker and T. C. Edwards.

San Diego—Dr. J. A. Parks, Chairman; Drs. Edw. Grog, H. A. Thompson and F. H. Mead.

Solano—Geo. W. Morton, Esq., Chairman; R. B. Dempsey, Esq., Secretary; Dr. W. S. Makemson, Rio Vista; Dr. S. G. Bransford, Suisun; Dr. C. E. Turner, Vallejo; Dr. P. V. Fry, Rio Vista; Dr. F. T. Bond, Vallejo; Dr. Jas. H. Hogan, Vallejo; Dr. Jas. B. Cawley, President, Vallejo.

Riverside—Drs. W. W. Roblee, Chairman; J. L. Baird and W. B. Sawyer.

Tehama—Drs. A. P. Tartar, H. H. Zimmerman and J. M. West.

This is a most excellent beginning, and it is gratifying to know that several of these committees have already written to the Central Committee concerning pure milk and other pure food measures, which they have already taken under investigation.

No less encouraging than the above, was the response from health officers throughout the state, who were asked to co-operate in the work of the Commission, and to allow the use of their names as associate members of the Pure Food Commission. Their cordial replies and assurances of good will may be construed as most hopeful signs for the cause of pure food and preventive medicine.

On September 28th, in response to the agitation inaugurated by Dr. Stanley P. Black, Health Officer of Pasadena, and a member of the Executive Committee of the Pure Food Commission, about twenty health officers of the region south of the Tehachapi, met in Los Angeles and formed the Southern California Health Officers' Association. Dr. C. C. Valle of San Diego was elected President; Dr. Stanley P. Black of Pasadena, Vice-President, and Dr. W. W. Roblee of Riverside, Secretary-Treasurer. Dr. A. E. Rishel, Chief Inspector of the Bureau of Animal Industry, read a paper on "Veterinary Inspection and Tuberculin Testing of Dairy Cattle." Dr. George W. Hood, Chief Milk Inspector of Los Angeles, spoke upon "Cleanliness of Milk; How It Can Be Secured Through Inspection." Prof. E. H. Miller, City Chemist, told of "Milk Standards; Simple Chemical Tests for Standards and Adulteration." Dr. L. M. Powers, City Health Officer, read an important paper upon "Diseases Conveyed Through Milk." Then followed a paper upon "Co-operation

of State and County Medical Societies Towards Securing Pure Milk," by George H. Kress, Secretary of the Pure Food Committee of the California State Medical Society. Dr. Stanley P. Black concluded the programme with a paper upon "Means Available Towards Securing a Pure Milk Supply."

The Association will meet again in December at Riverside on the afternoon before the semi-annual meeting of the Southern California Medical Society. In this Association the Pure Food Commission expects to find a strong ally in Southern California health matters.

While considerable effort has been centralized on the organization work of the commission, the members of the Central Committee located near Los Angeles have also given much thought to local problems.

Thus, about four weeks ago, several evenings were spent with the county health officer and the first draft of a new county health ordinance, modeled upon the State law, was drawn up. In this work, the Commission had the co-operation of Dr. K. N. Foster, Secretary of the State Board of Health. Dr. Foster, while in Los Angeles, also aided greatly in supporting Dr. Le Moyne Wills of the State Board of Health and the committee of physicians from the Los Angeles County Medical Association, who appeared before the City Council in favor of a "cleaning up" ordinance. As a result of the united efforts of these gentlemen, Los Angeles is to have a sanitary housecleaning, and we hope a non-appearance of the plague.

Last, but not least, we are able to chronicle the successful outcome of our battle with the Los Angeles Gas and Electric Company, which corporation and the railroads, the Commission has been fighting for the last six months in an effort to do away with the smoke nuisance of Los Angeles. This nuisance has become a grievous evil in the South, and the successful outcome of the battle with the gas and railroad companies is a decidedly pleasant condition of affairs, for these companies have dominated the City Council for years.

In spite of the many delays, then, the final vote was taken on the ordinance, every single councilman voting for the ordinance. Why? Because the agitation had centered the attention of the public on the ordinance, and as the public were in favor of the ordinance, did not dare to vote against it.

The Commission hopes that all County Medical Associations which have not yet done so, will give the appointment of their Pure Food Committees their early consideration.

Only by united co-operation can we attain to that influence in public health affairs which it is both the duty and honor of the medical profession to bear.

The representation of your respective County Association is the first step. If your President has not yet appointed the committee to represent your county, call his attention to the matter. More anon.

The following articles have been approved by the Council on Pharmacy and Chemistry:

Emulsion Cloftlin (Cloftlin Chem. Co.), Regulon (Reinschild Chem. Co.), Chologestin (F. H. Strong Co.), Diazyme Essence (Fairchild Bros. & Foster), Diazyme Glycerole (Fairchild Bros. & Foster), Holadin (Fairchild Bros. & Foster).

The University of California Hospital is about to open a Training School for nurses and will receive applications for admission. Address A. A. D'Ancona, M. D., Superintendent, University of California Hospital, Parnassus avenue, San Francisco.